REPORT RESUMES

ED 015 667 64 EM 005 617

TELEVISION AND THE CONTINUING EDUCATION OF TEACHERS, A FEASIBILITY STUDY OF THE POTENTIAL OF NETWORK TELEVISION FOR DISSEMINATION OF EDUCATIONAL RESEARCH INFORMATION. FINAL REPORT.

BY- CRESHKOFF, LAWRENCE
COLUMBIA UNIV., NEW YORK, TEACHERS COLLEGE
REPORT NUMBER BR-6-2012 PUB DATE AUG 67
REPORT NUMBER NDEA-VIIB-608
CONTRACT OEC-1-6-062012-2219
EDRS PRICE MF-$0.50 HC-$4.56 112P.

DESCRIPTORS- *FILM PRODUCTION, *EDUCATIONAL INNOVATION, *QUESTIONNAIRES, *LEARNING MOTIVATION, *INSTRUCTIONAL TELEVISION, TEACHER EDUCATION, CHILD RESPONSIBILITY, FEASIBILITY STUDIES, TEACHING TECHNIQUES

THIS 3-PHASE STUDY SOUGHT TO BRIDGE THE GAP BETWEEN THE PRODUCER OF NEW EDUCATIONAL IDEAS AND THE PRACTITIONER, OR TEACHER, BY EFFECTIVE USE OF NETWORK TELEVISION. PHASE I, DATA GATHERING, INCLUDED REVIEW OF THE LITERATURE, AND IDENTIFICATION OF INNOVATIONAL PROJECTS BY CONSULTATION, FIELD VISITS, AND A QUESTIONNAIRE SENT TO MEMBERS OF 2 NATIONAL ORGANIZATIONS. AS A RESULT, MORE THAN 125 INNOVATIONAL ACTIVITIES WERE STUDIED. IN PHASE II, TEACHERS IN A NATIONAL "ACCIDENTAL" SAMPLE ANSWERED A QUESTIONNAIRE DESIGNED TO IDENTIFY THEIR AREAS OF INTEREST IN TEACHER EDUCATION. OVER 1100 RESPONDENTS EMPHASIZED THEIR INTEREST IN LEARNING MOTIVATION AND HELPING CHILDREN LEARN TO ACCEPT RESPONSIBILITY. THUS, PHASE III WAS THE PRODUCTION OF A SAMPLE FILM IN THE PROPOSED TV SERIES FOR TEACHERS, ORGANIZED AROUND TEACHING PROBLEMS RATHER THAN CURRICULUM. USING A GRADE 3 SCIENCE CLASS AND A GRADE 9 GEOGRAPHY CLASS, THE FILM DEMONSTRATES EFFECTIVE TEACHING TECHNIQUES. THE STUDY RECOMMENDS A WEEKLY, FLEXIBLE-FORMAT TV SERIES TO DISCUSS EDUCATIONAL INNOVATIONS USEFUL TO TEACHERS AT ALL GRADE LEVELS AND IN ALL SUBJECT AREAS. APPENDICES PRESENT 58 ABSTRACTS OF INNOVATIONAL PROJECTS, QUESTIONNAIRES, AND THE FILM TRANSCRIPT. (LH)

ED015667

A B68

FINAL REPORT

BR
Project No. 6-2012

EM005617

Contract No. OEC-1-6-062012-2219
PA64

TELEVISION AND THE CONTINUING EDUCATION OF TEACHERS

A Feasibility Study of the Potential of Network Television for Dissemination of Educational Research Information

August 1967

U. S. Department of
Health, Education, and Welfare

Office of Education
Bureau of Research

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

TELEVISION AND THE CONTINUING EDUCATION OF TEACHERS

A Feasibility Study of the Potential of Network Television for Dissemination of Educational Research Information

Project No. 6-2012
Contract No. OEC-1-6-062012-2219

Lawrence Creshkoff

August 1967

The research reported herein was performed pursuant to a contract with the Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

EM 005 617

Teachers College, Columbia University
New York, New York 10027

TABLE OF CONTENTS

ACKNOWLEDGMENTS iii

INTRODUCTION 1

METHOD 3

Phase I. Identifying Innovational Resources: Review of the literature - Consultation - Suggestion Sheet - Field Visits / 3
Phase II. Identifying Teachers' Interest Areas / 8
Phase III. Producing the Pilot Film / 9

RESULTS 10

Identifying Teachers' Interest Areas: Responses to questionnaire / 10
Respondents' Comments / 17
The Pilot Film / 21
Identifying Innovational Resources / 22

DISCUSSION 24

CONCLUSIONS AND RECOMMENDATIONS 27

Design of the Series - Advisory Board - Series Content / 28
Program Structure and Production Techniques / 29
Program Length and Frequency - Scheduling / 30
Promotion and Utilization / 31

SUMMARY 33

APPENDICES 36

Appendix A. Transcript of pilot film: "Mainly for Teachers"
Appendix B. A Partial Inventory of Innovation
Appendix C. Excerpts from Mail
Appendix D. Covering letter, Questionnaire I
Appendix E. Questionnaire I: Suggestion Sheet
Appendix F. Questionnaire II: The Teaching Process
Appendix G. Consultants
Appendix H. Selected Bibliography

ACKNOWLEDGMENTS

At a time when cooperation between education and industry is emerging in a number of forms -- to design equipment, construct curricula, and tackle many hitherto unresolved problems -- it is totally appropriate that a study of the potential use of network television as a means for the dissemination of information about recent educational research be a collaborative effort by people from the world of education and from the broadcasting industry. The present study originated in the thinking of three such people:

Dr. Arthur W. Foshay, Associate Dean for Field Services and Research, Teachers College, Columbia University.

Mr. Edward Stanley, Director of Public Affairs for the National Broadcasting Company. Mr. Stanley is perhaps best known in the educational world for his conception and supervision of "Continental Classroom," the first use of a television network for teacher education.

Mrs. Gloria D. Kirshner, an experienced teacher who has been the educational consultant for many children's programs, a writer for educational television programs, and editor of the teacher's guides for "Exploring" and "Animal Secrets" (both NBC), and for "The 21st Century" (CBS).

Dr. Foshay, Mr. Stanley, and Mrs. Kirshner served as the Steering Committee for the present study.

The present writer came to the study as Project Director from a background in educational television programming (WGBH-TV, Boston, and Chelsea Closed-Circuit Television Project, New York) and writing and editing for

the commercial television industry (Television Information Office and CBS, Inc.).

Dr. Barbara R. Slater, of the Pelham (N.Y.) Public Schools, served as part-time Research Associate.

Mr. William G. Riggan, formerly a teacher in a New England independent school, was part-time Research Assistant while studying for the Master's Degree at Teachers College.

Miss Silvia Mablin was Project Secretary.

We wish to thank Dr. Don Davies, Executive Secretary, National Commission on Teacher Education and Professional Standards of the National Education Association, and Dr. Edward C. Pomeroy, Executive Secretary, American Association of Colleges for Teacher Education, also National Education Association, for their assistance in the distribution of the study's two questionnaire instruments.

We also express our appreciation to Mr. P. Kenneth Komoski, now President of the Educational Products Information Exchange, who as Associate Executive Officer of the Teachers College Institute of Educational Technology assisted in preparing the original study proposal to the U. S. Office of Education; to Mrs. Arlyne Rochlin for her assistance in numerous administrative matters; and -- for secretarial and clerical assistance on various aspects of the project -- to Mrs. Miriam Bernstein, Mrs. Elizabeth Farmand, Miss Mary Dee Libbey, Miss Marilyn Lundquist, and Miss Jean Thompson.

The writer wishes to thank particularly the many members of the Teachers College Faculty who shared with him their ideas and insights, and who gave meaning during his brief stay among them to the term "colleague."

Lawrence Creshkoff

August 1967

INTRODUCTION

The decade since the mid-1950's has been a period of unprecedented growth in both the challenges facing American education and the innovations undertaken to meet these challenges. However, despite the concerted efforts of many agencies at the national, state, and local levels, only a very small portion of the educational community has had the opportunity to observe directly many of the important and provocative results of educational research and development taking place throughout the educational enterprise.

The objective of the Teachers College Mass Media Feasibility Study has been to bridge the gap between educational knowledge and educational practice through network television. This has been interpreted to mean that the primary audience (or "target population") is the teacher in service, and that the educational knowledge here referred to is that which is ready for application by such teachers. Given this view of the message, the medium, and the target, we examine here the feasibility of a series of weekly network television programs designed mainly for teachers.

Television reaches some 94 per cent of the nation's homes, and thus, if matters of educational importance are made available on television, no teacher need lack a source of professional refreshment and access to the mainstream of American educational thought. The convenience of such a series, easily available in a home situation, is of consequence. The pressures of urban transportation and the scarcity of training resources in non-urban situations can both be overcome.

Also foreseen as a vital element in such a series is a network of cooperative relationships with local school systems all across the nation, with colleges of teacher education, and with all of the major professional groups involved with the teaching process, to insure programs that meet the needs and standards of the teaching profession.

The incentive of in-service credit in local school systems can be expected to encourage local workshops, seminars, and discussion groups; these, together with collateral readings, research papers, teachers' guides, etc., can most effectively reinforce the teaching intentions of the programs themselves.

While the target audience is mainly teachers, it is expected that parents, school board members, community leaders, and all Americans interested in the education of the nation's youth will be looking in.

The present report and the accompanying film, "Mainly for Teachers," result from the research and film production carried out during the academic year 1966-67 under a contract from the U. S. Office of Education to conduct "A Feasibility Study of the Potential of Network Television as a Distribution Device for Educational Research Information."

The Pilot Film

Since it is recommended in the present report that the actual content of the proposed series be determined through collaborative planning with the appropriate professional organizations, "Mainly for Teachers" has been prepared to serve as a demonstration of the potential of network television -- not as a specific example of an individual program.

The pilot seeks to show how the medium can be used to answer two continually recurring requests from teachers who were consulted at conventions and meetings many months in advance of launching the study, as well as from teachers who participated through letters and questionnaires in the investigative phases of the study. In paraphrase, these requests were:

1. Put the camera on the child. Show us what happens when Johnny learns.
2. Use the camera to let us visit other classrooms; we rarely get a chance to see another teacher teaching.

The expressed concerns of the teachers were with the teaching process itself -- the techniques that make for more effective teaching, no matter what subject is being taught.

In response to the urgency of these requests, and because a tool powerful enough to reach and help an entire nation should, if possible, be utilized to do so, the chosen approach was to seek concerns of universal interest to all teachers: from kindergarten through high school and junior college, from beginning reading to science. The "universal concern" chosen for the pilot was the question of motivation -- the teacher's continuing concern with attracting and holding his pupils' attention to the learning tasks at hand. For the teacher this is a constant concern, and it applies to all the children, all the time. Other universal concerns that make insistent demands on the skills of every teacher in every classroom, e.g., the slow learner, the culturally different or deprived, classroom management, evaluation of learning by the teacher, might equally well have been chosen.

To illustrate possible solutions to the problem of motivation across a wide range of classrooms, a high school social studies class and an elementary science class were selected to be filmed. Both classes were testing new curriculum projects. The pilot, therefore, carries a double message: at one level, the innovative subject matter; at another, the teaching process. In addition, both classes happened to illustrate a striking cultural and ethnic heterogeneity. Since the pilot film demonstrates both substance and method, the viewing teacher might incorporate either or both in his own classroom practice.

By providing the nation's teachers with the opportunity to observe the results of educational research as they are applied in real teaching situations, a series of television programs like "Mainly for Teachers" could serve to increase receptivity to innovation throughout the educational community. In the long run, however, the stimulative and seminal effects of weekly exposure to other teachers' methods and styles could be even more significant.

METHOD

The study was conducted in two data-gathering phases and one production phase. The first data-gathering phase was concerned with achieving an overview of recent innovational activity in education and in identifying projects that could serve as subject matter for a television series. The second sought to discover what topics practicing teachers would be most interested in having included in such a series. The production phase consisted of making a sample film for the series to be developed from a synthesis of the findings of Phases I and II.

Phase I. Identifying Innovational Resources

Four methods were employed in the first data-gathering phase of the study: review of the literature, consultation, a questionnaire, and visits to innovational projects.

Review of the literature. While a great deal has been published by the originators of certain projects or by their associates, relatively little was found of an analytic or evaluative nature written by third parties. Goodlad's *The Changing School Curriculum* provides comparative notes on about a dozen of the best-known curriculum projects. Perhaps the most useful reference source for the purposes of the present study has been the 1966 *Report of the International Clearinghouse on Science and Mathematics Curricular Developments*, published by the Commission on Science Education of the American Association for the Advancement of Science. Happily, the editors have been broadening the scope of the entries: some social studies projects are now included. The amount of information supplied, however, varies greatly from entry to entry depending on how completely the project directors respond to the AAAS questionnaire. (A listing of major references consulted by the study appears as APPENDIX H.)

Consultation. A number of people from Teachers College as well as other educational institutions were consulted for guidance to innovational activities in the areas of their specialties, including art education, computer-assisted instruction, language arts, reading, organizational problems of the schools, mathematics, science, social studies, vocational and industrial education, urban education, and pre-service education. Beyond the leads to further contacts provided, these consultations were particularly useful for the personal evaluations of ongoing projects they provided, along with insights into some of the problems that arise in the transition from controlled laboratory experiment to institutionalization within a school system. (A listing of persons consulted appears as APPENDIX G.)

Questionnaire I: "Suggestion Sheet." For further guidance in identifying significant innovational projects -- particularly those of specifically local and regional interest -- a request for suggestions was sent to the members of the National Association of State Directors of Teacher Education and to a sample drawn from the membership lists of the American Association of Colleges for Teacher Education. (A copy of the covering letter and suggestion sheet appear as APPENDIX D and E.)

As will be noted, the covering letter was signed by a member of the study's steering committee, Edward Stanley, who is Director of Public Affairs of the National Broadcasting Company. This was done to help locate the inquiry contextually -- as an initial step in the development of a network television series geared to the informational needs of the educational community.

Field visits. To gather information at first hand, visits were made to a number of innovational projects by members of the study staff or steering committee:

1. P.S. 175, New York (10/19/66)

   Demonstration of research being conducted by New York University team in use of Edison Responsive Environment in a disadvantaged area.

2. Walton Public School, Philadelphia (10/20/66)

   Use of Fries structural linguistics in teaching reading to classes at first- and third-grade levels.

3. Simon Gratz High School, Philadelphia (10/20/66)

   Observation of materials and techniques developed by vocational guidance program of The Brooks Foundation.

4. P.S. 219, Flushing, N.Y. (10/23/66)

   Observation of newly constructed circular "school without walls" for use in ungraded K-2 program.

5. P.S. 165, New York (11/15/66)

   Observation of application of new programs and organizational forms in an old school structure housing some 1700 elementary school children.

6. Public Schools Demonstration Center, Tenafly, New Jersey (12/9/66)

   Demonstration of closed-circuit television and videotape recording to stimulate experimental classroom work and subsequent self-criticism by students and teachers.

7. Teachers College, Columbia University, New York (12/14/66)

   Demonstration by Professor Robert Allen of instruction in grammar using the tagmemic approach, to a group of fifth-grade Harlem children.

8. Responsive Environment Demonstration Center, Brooklyn, New York (1/26/67)

   Large-scale use of Edison Responsive Environment in teaching reading.

9. LeConte School, Berkeley, California (2/7/67)

   Materials and methods developed by Science Curriculum Improvement Study as utilized in a heterogeneous urban elementary school.

10. Sequoia High School, Redwood City, California (2/8/67)

    Demonstration of materials developed by High School Geography Project in a ninth-grade social studies class.

11. Glorietta School, Orinda Village, California (2/9/67)

    Science Curriculum Improvement Study materials utilized in a prosperous exurban setting.

12. Brentwood School, East Palo Alto, California (2/10/67)

    Demonstration of computer-based instruction in mathematics and reading developed by Professor Patrick Suppes at Stanford University.

13. Long Beach High School, Long Beach, New York (5/23/67)

    Classroom demonstration of a simulation game ("Consumer") developed by Professor James S. Coleman and associates in the Department of Social Relations, The Johns Hopkins University.

Phase II. Identifying Teachers' Interest Areas

With a growing file of information on hand as to the extent and diversity of innovational projects in being, a second questionnaire was designed to determine in which areas related to the practice of their profession teachers felt the greatest interest in and need for information.

The questionnaire consisted of two parts: a short form and a long form. The short form listed a number of interest areas in broad outline; the long form made it possible for the respondents to go into these areas in more specific detail.

As with the first "Suggestion Sheet," the second questionnaire was accompanied by a covering letter from the Director of Public Affairs of the National Broadcasting Company. It was distributed through the facilities of the National Commission on Teacher Education and Professional Standards (NCTEPS) of the National Education Association at regional meetings throughout the United States. (A copy of Questionnaire II appears as APPENDIX F.)

Phase III. Producing the Pilot Film

In order to illustrate what a representative program in the proposed television series would be like, a major effort of the study went into producing a half-hour color film.

To lend verisimilitude to the sample program and to provide a realistic basis on which to study the production problems of the proposed series, illustrative scenes were filmed under actual classroom conditions, using modified cinema verité techniques. A ninth-grade class testing materials from the High School Geography Project of the Association of American Geographers was filmed on February 23, 1967, at Sequoia High School, Redwood City, California. The next day, a third-grade class using materials of the Science Curriculum Improvement Study was filmed at Washington School, Berkeley, California.

The classroom filming was done under the direction of Davidson Films, San Francisco, who have had wide experience in producing films in collaboration with a number of curriculum projects in the natural and social sciences. The classroom footage was edited in New York and synthesized with descriptive and analytical commentary by Dr. Arthur W. Foshay, Associate Dean of Research and Field Services, Teachers College.

RESULTS

The demonstrable results of the study take three forms: (1) a tally of preferences among 39 interest areas expressed by more than 1,000 teachers; (2) the pilot film, which serves as a sample of what could be done in the proposed television series; and (3) a file of descriptive material relating to more than 100 innovational activities.

Identifying Teachers' Interest Areas

The self-mailer questionnaires distributed to teachers to determine the areas they would be most interested in having treated in the proposed television series evoked a substantial response. By May 31, 1967, three months after distribution began, a total of 1,157 questionnaires had been returned. Because the circumstances under which the questionnaires were distributed were informal -- as "giveaways" at regional meetings of groups affiliated with the National Commission on Teacher Education and Professional Standards -- there are no firm figures from which to compute rate of return. Of the 1,157 questionnaires returned, 12 were left blank, leaving a total of 1,145. Of the respondents, 938 answered questions in both the short- and long-form questionnaires; 143 answered the short-form only; and 64 answered the long-form only.

TABLE I. Cumulative numbers of respondents to short and long forms

Responded to:	No. of respondents to short form	No. of respondents to long form
Short form only	143	--
Both forms	938	938
Long form only	--	64
TOTALS	1,081	1,002

As can be observed by referring to the copy of the questionnaire (APPENDIX F), the areas of possible interest were arranged into four basic topics:

I. Meeting the Intellectual Challenge of Teaching

II. Forming a Human Partnership with Children

III. The Teacher and the Community

IV. Professional Concerns of the Teacher

The first part of the questionnaire (the short form) subdivided Topic I into two sections, and Topic II into four sections. Table II (see page 12) reports the number of responses to these eight topics and percentages of total short-form respondents (1,081) in descending order of frequency.

The responses to the short form clearly indicate strongest interest in areas related to teaching as a technique, teaching styles, etc. Nearly twice as many chose Item 1 as chose Item 8, The Teacher and the Community. The results also suggest that these teachers responded more favorably to specific areas than to generalized statements. Items 2 and 3 both appeared in the questionnaire as sub-headings under Item 7, yet nearly half again as many respondents selected the particular examples over the broader generalization.

TABLE II. Responses to short-form questionnaire

Order of Frequency		No. of responses	Per cent (N=1,081)
1.	Meeting the Intellectual Challenge of Teaching: Studying teaching; effective teacher styles, the art of teaching	848	78
2.	Forming a Human Partnership with Children: Encouraging the uniqueness of the individual	639	59
3.	Forming a Human Partnership with Children: Developing substantial life values in children	633	59
4.	Professional Concerns of the Teacher	586	54
5.	Forming a Human Partnership with Children: Building successful relationships with children of all varieties of background	580	54
6.	Meeting the Intellectual Challenge of Teaching: Acquiring insights into the nature of knowledge and how new knowledge should be organized and taught	562	52
7.	Forming a Human Partnership with Children: Capitalizing on the exciting knowledge we now possess concerning personality development and its relationship to teaching and learning	448	41
8.	The Teacher and the Community	426	39

The long-form questionnaire provided the respondents with the opportunity to be even more specific and to express their interests with respect to 39 areas, all related to the four basic topics. In Table III, the responses to the long-form questionnaire have been arranged in descending order of frequency within each of the basic topics. Percentages are based on the 1,002 questionnaires that contained responses to the long form.

TABLE III. Responses to long-form questionnaire

MEETING THE INTELLECTUAL CHALLENGE OF TEACHING

Order of Frequency		No. of Responses	Per cent (N=1,002)
1.	Studying teaching: encouraging curiosity, independent study, ingenuity, resourcefulness, achieving active individual attention	702	70
2.	Studying teaching: challenging the superior students without destroying the will to learn of the others	660	66
4.	Studying teaching: dealing with underachievers	623	62
6.	Studying teaching: stimulating students with the excitement of the subject	600	60
9.	Studying teaching: helping students to discover relationships, conflicts and parallels among problems and concepts, and between different fields of knowledge	552	55
11.	Studying teaching: developing competence in basic skills	528	53
17.	Content: incorporating discoveries at the frontiers of knowledge not yet in textbooks into the curriculum	481	48
20.	Content: identifying the concepts, principles and methods of inquiry suitable for the capacities of given groups at given times	448	45

FORMING A HUMAN PARTNERSHIP WITH CHILDREN

Order of Frequency		No. of Responses	Per Cent (N=1,002)
3.	Life values: helping children learn to accept responsibility	636	63
5.	Uniqueness of individual: helping youngsters learn to cope with their disappointments, failures and shortcomings	608	61
7.	Uniqueness of individual: discovering the ways in which the individual student is best able to learn	592	59
14.	Life values: helping youngsters to find the meaning of life, the purpose to which they wish to devote their lives, the meaning of living as free men in a free society	514	51
16.	Uniqueness of individual: uncovering and developing potential talent	496	50
18.	Uniqueness of individual: developing the positive self-concept of children and youth	465	46
19.	Life values: helping children learn to identify with the needs of others and the Family of Man; the common humanity of all mankind	454	45
22.	Uniqueness of individual: encouraging children to plan for a life in a technological society; career planning; choosing appropriate role models	434	43
25.	Uniqueness of individual: preventive measures to be practiced with potential dropouts	427	43
33.	Relationships with children of diverse backgrounds: the challenge of culturally alienated youth	350	35

PROFESSIONAL CONCERNS OF THE TEACHER

Order of Frequency		No. of Responses	Per Cent (N=1,002)
8.	Flexible scheduling, team teaching, ungraded programs, computer-assisted instruction, the role of the paraprofessional in freeing the teacher, differentiation of responsibility	566	56
10.	The voice of the teacher in professional decisions	542	54
12.	Securing meaningful in-service training	524	52
13.	Time to teach: administrative interference with the teaching process; bureaucratic practices, unnecessary paper work, fund drives	519	52
15.	A voice on the issues of the day that affect education	498	50
23.	Developing a personal strategy for keeping up to date	432	43
24.	Teacher-administrator cooperation	428	43
26.	The status of the teacher in school and community	410	41
28.	Intellectual freedom and the right to dissent	408	41
29.	Developing resources for growth in self-knowledge	405	40
30.	The possibilities and the problems in Federal programs	393	39
32.	Participation in planning	363	36
34.	Professional growth	333	33
36.	Current developments in pre-service training	307	31
37.	Compensatory education	264	26
39.	School integration	223	22

THE TEACHER AND THE COMMUNITY

Order of Frequency		No. of Responses	Per cent (N=1,002)
21.	The role of the teacher as a catalyst to understanding the social and moral questions of our time, assisting youth with the formation of values and a sustaining ethical standard	447	45
27.	The role of the school in social change	410	41
31.	Involving parents and families in school plans	368	37
35.	The role of the teacher as an active participant in the lives and affairs of communities and cultures which may be different from our own	323	32
38.	How to respond to community requests for help	235	23

The results of the long-form questionnaire closely parallel the short-form results reported in Table II and help to specify the areas in which respondents feel that a television series can provide them with helpful information. Primary emphases are placed on learning successful strategies for teaching and relating with children.

The specific again wins out over the general. All but one of the specific items under "Forming a Human Partnership with Children" received a higher percentage of responses than did the generalized statement on the relationship between personality development and learning that appeared in the short form.

Concerned as we are with educational innovations as a whole, it is interesting to note that seven responses were checked with greater frequency than the only one listing specific recent innovations ("Flexible scheduling, team teaching, ungraded programs, computer assisted instruction..."). This suggests that the respondents were expressing greater interest in learning how to do a better job -- by whatever means -- than in becoming acquainted with particular organizational and technological innovations that they might or might not have heard about.

The low percentages achieved by five topics dealing with areas of current social controversy are of special interest in these times:

Order of Frequency		Per cent
33.	Relationships with children of diverse backgrounds: the challenge of culturally alienated youth	35
35.	The role of the teacher as an active participant in the lives and affairs of communities and cultures which may by different from our own	32
37.	Compensatory education	26
38.	How to respond to community requests for help	23
39.	School integration	22

Respondents' Comments

Each questionnaire had a good deal of space for comments, which could be general or related to specific responses. Nearly two-thirds of the respondents did write comments. A good many of the comments contained suggestions for what the writers regarded as a televised in-service teacher education course. Some examples:

"It would be interesting and stimulating to see two or three effective teachers presenting the same subject matter to similar children in different ways -- ways that reflect their own personality as well as the subject."

-- Clifton, New Jersey

"I would like to see different methods of motivation of students."

-- Springfield, Massachusetts

"How to deal with individual differences."

-- Fallon, Nevada

"How can one apply practically the 'ideals' of college education courses? How can this apply to the small school -- not just the new, modern set-ups?"

-- Mitchell, South Dakota

"It might be helpful to point up areas of prevention of learning disabilities as well as cures."

-- Philadelphia, Pennsylvania

"I would like to see a program which discusses the various certification requirements in the fifty states and the feasibility of adapting national minimal certification requirements so that professional teachers might be able to move freely and retain their benefits."

-- Van Buren, Arkansas

"Too many teachers are subject matter oriented. Stress the importance of an accepting teacher to the mental health of children from poor home environments."

-- Ocean View, Delaware

Others made general comments about the proposed series:

"This series sounds like a real service to not only the teachers but more especially to the pupils who are too often victims of our static, unimaginative methods."

-- Piedmont, Alabama

"I feel teachers learn more by observing good teaching than reading about methods."

-- Akron, Ohio

"Too often we read of various approaches but never get an opportunity to observe them."

-- Amery, Wisconsim

"We are always striving for the most effective way of presenting ideas in the classroom. Seeing how someone else works helps."

-- Union City, Tennessee

"I wish to work on my Doctorate in Audio-Visual, but there are no schools in my area. More college courses and opportunities to practice are imperative. Could college credit be given for your set-up? In the West, distances make TV more difficult, but it is also more necessary."

-- Aztec, New Mexico

"We wonder whether such a series will only encourage more parents to become 'education experts' and to be more critical of our public school systems."

-- Crystal City, Missouri

A number of comments dealt with the questionnaire itself. Some were favorable:

"This questionnaire is an excellent way of obtaining information... May I request that extra film copies be made available for college teachers for their students when completed?"

-- San Diego, California

> "I found the questionnaire to be quite comprehensive... The one item I did not notice is Discipline, which is a problem of major importance to many teachers."
>
> -- Kearny, New Jersey

> "I found this questionnaire very interesting. I have enjoyed thinking about these items. Even more would I like to see this television continuing teacher education. Hope this becomes a reality."
>
> -- Denver, Colorado

> "This is an excellent list of objectives and I feel that we, as teachers, need to learn more about each one of them, so we may include them into our own specialties of teaching."
>
> -- Fulton, Missouri

On the other hand:

> "I started checking these items and threw the paper in the corner in disgust. All beautiful phrases right from a text book, it appears."
>
> -- Painted Post, New York

> "I am sorry, but I cannot see how anything new, innovative, or valuable can come out of this repetition of the same old educational jargonese in outline form. Meaningless language leads to meaningless response and practice."
>
> -- Los Angeles, California

The diversity of ideas expressed in this very small, random sampling of comments from respondents to the questionnaire provides vivid confirmation -- if such were needed -- of the wide variety of ideas, attitudes, interests, and personalities to be found among the nation's teachers. It also underscores the fundamental question: How can the necessarily limited amount of time that could be made available on a national television network be used to be of greatest service to the educational community?

The Pilot Film

The response from the teachers was revealing and led to the adoption of what might be called a teaching-strategy approach as the organizing principle for the sample program. (The rationale for this decision is presented in the Discussion chapter of the present report.) As noted earlier, the topic chosen for treatment in the pilot film was "Motivation."

Motivation is a highly complex concept; in some ways it is ambiguous. The film concentrates on three conditions -- controlled by the teacher -- that can influence the extent and degree of student motivation: (1) treatment of subject matter; (2) teaching methods; and (3) learning methods used by the pupils.

Treatment of subject matter. In their conceptions of the subject matter to be taught, both curriculum projects chosen as illustrations (Science Curriculum Improvement Study and High School Geography Project) are particularly strong. Both deal with intrinsically important material; the pilot film shows third-graders working with relative motion and ninth-graders, with an international border dispute.

Teaching methods. Both projects present their subject matter as open-ended problems to be solved; the children have to think, not memorize. In the SCIS class, an ingenious device is used to help make an abstract idea concrete.

Learning methods. Both classes demonstrate a high degree of involvement with the subject matter through pupil interaction. The HSGP class provides an interesting example of role playing as a learning method, followed by student evaluation.

In addition, the film provides a striking illustration of a probing teaching style used by the teacher in the third-grade class.

A complete transcript of the pilot film for the proposed series, under the working title "Mainly for Teachers," appears as APPENDIX A. Prints of the film have been deposited at Teachers College, the Science Curriculum Improvement Study, the High School Geography Project, and the U. S. Office of Education.

Identifying Innovational Resources

The first data-gathering phase of the study (literature review, consultations, "Suggestion Sheet" mailing, and field visits) resulted in a flood of mail containing research reports, project descriptions, and references to hundreds of educators described as being involved in some form of innovation. Names of all individuals and projects brought to the attention of the study staff and steering committee have been catalogued and are part of the study's permanent files on deposit at Teachers College.

The materials received were read and abstracted. Wherever films were available that promised to give a clearer picture of the project, they were sent for and viewed. The results of this process of examination appear in APPENDIX B ("A Partial Inventory of Innovation") of the present report. Brief descriptions of 58 representative projects are given, along with their location and the name of the project director. When appropriate, the descriptions include the names of three or four schools or school systems where the project is reported to be in use. In selecting the 58 activities, efforts were made to apply such criteria as currency, significance, and originality. APPENDIX B also lists 69 other projects about which information is available in the study files.

While response to the study's inquiries was substantial, it was not total. Some projects clearly lack the facilities (if not the inclination) to reply to requests for information, and some significant omissions will be evident to the informed reader. The material described, however, does provide a base on which to carry on the research that will be needed to put the proposed television series into active production.

In addition to providing references to sources of information, a number of the respondents to Questionnaire I ("Suggestion Sheet") wrote letters giving their reactions to the basic idea for the proposed programs. In general, those who took the time to write such letters expressed enthusiastic approval. A sampling of excerpts from the letters appears as APPENDIX C.

DISCUSSION

The decision to employ a teaching-strategy approach in the pilot film grew from the results of the investigative phases of the study, which had demonstrated not only a vast array of innovational activity throughout the United States, but also a wide diversity of interests among teachers. Long before the film went into production, certain areas of consensus had evolved:

1. Illustrative materials showing the innovations in use should be filmed in actual classrooms, not under experimental laboratory conditions.
2. Insofar as the material itself permitted, the physical conditions in the classrooms chosen for illustration should be fairly typical.
3. The teachers and pupils illustrated should be believable within their contexts.
4. Materials and methods illustrated should lend themselves to institutionalization under a wide range of circumstance.
5. There is no need to be limited by degree of "novelty." Proven ideas that have been adapted to new uses should also be demonstrated.
6. The purpose of the series should be to inform, not to persuade or sell.
7. Because total carryover of audience from week to week cannot be assumed, each program in the series should be self-contained with respect to subject matter and frames of reference.

8. Each program should be designed to lend itself to secondary distribution as a film for in-service and pre-service training.

Such considerations are, however, procedural and do not touch upon the essential question of the organizing principle for the proposed series. As the study moved into its third phase, i.e., designing a sample program that might serve to demonstrate the rich potential for the series, it became essential to search for patterns that would bring into congruence the vast diversity of educational interests with the simple truth that television viewing is a highly individualistic affair. Very few members of the television audience stay with a program for long out of a sense of duty; the program must appeal to and satisfy what they perceive to be their needs.

With a wide range of information to be communicated to a highly diverse audience, a means was sought to appeal to the teacher in all teachers. It was found in the responses to Questionnaire II.

Seven items in the questionnaire were mentioned as interest areas by at least 60 per cent of the respondents:

		Per cent
1.	Studying teaching: effective teacher styles; the art of teaching	78 *
2.	Studying teaching: encouraging curiosity, independent study, ingenuity, resourcefulness, achieving active individual attention	70
3.	Studying teaching: challenging the superior students without destroying the will to learn of the others	66
4.	Life values: helping children learn to accept responsibility	63

---

* This item from short-form questionnaire; all others from the long form.

	Per cent
5. Studying teaching: dealing with underachievers	62
6. Uniqueness of individual: helping youngsters learn to cope with their disappointments, failures, and shortcomings	61
7. Studying teaching: stimulating students with the excitement of the subject	60

The emphasis on *process* is evident: the teachers seem to be saying, "We need to know more about how to handle the many problems, both long- and short-range, that all teachers face all the time."

One theme that runs through the questionnaire responses is *motivation*. It is variously implied in "encouraging curiosity," "achieving active individual attention," "challenging the superior students...," "dealing with underachievers," and the like. To demonstrate how the teaching-strategy approach might be applied in the proposed television series, the pilot film takes a universal pedagogical question and shows how it is met in some new contexts. It attempts to deal with motivation via two innovative curriculum projects. In the course of exposure to the film, the teacher-viewer will have seen not only samples of the two projects and their particular motivational methods, but also samples of two teaching styles other than his own.

CONCLUSIONS AND RECOMMENDATIONS

In the design of a series of programs that would effectively make use of network television for the continuing education of teachers, four basic questions must be given primary consideration:

What should be televised?

Where will it come from?

How should the content be structured?

How can an audience be built?

Through its initial investigations, the Mass Media Feasibility Study was able to identify a great deal of potential subject matter as well as many sources of content. The projects described in APPENDIX B ("A Partial Inventory of Innovation") by no means exhaust the field, but they do suggest the wealth of material available.

The results of our study of teachers' interest areas suggested the manner of organizing the content, and the experience of producing the pilot film provided evidence of the viability of the chosen approach. To the extent that the interest areas identified do, indeed, reflect the felt needs of the potential viewers, a first step has been taken toward building an audience, i.e., offering a service that teachers want and feel they can use.

Fundamental to the entire study has been the information made available through the participating professional organizations -- the National Association of State Directors of Teacher Education, the American Association for Colleges of Teacher Education, and the National Commission on Teacher Education and Professional Standards. Their role in the present study suggests the importance of seeking the participation of all professional organizations of educators in the planning of the proposed television series.

Design of the Series

It is proposed that the approach developed in the present report and exemplified in the pilot film be adopted for a series of television programs built around the questions that all teachers face in the classroom. Such an approach will demonstrate the in-service application of the results of recent educational research.

Advisory Board

It is recommended that an advisory board be formed, including representatives from appropriate institutions of higher education and from professional educational societies.

Series Content

While the specific content of the programs should reflect the judgment of the advisory board, the present study suggests the feasibility of developing programs that deal with a wide array of familiar but perplexing questions, some examples of which follow. These are proposed, not as titles of programs, but as illustrative themes. Fresh, interesting material is available about each of them.

A. How can the school foster development of thought processes, concept formation, and independent thinking as contrasted with rote learning?

B. How can the teacher deal with individual differences among pupils (including academic, social, physical, and cultural differences)?

C. How can the teacher evaluate the child's progress and use this evaluation?

D. What is the value of independent work (including homework), and how can it be enhanced?

E. How can classroom teachers, special area teachers, specialists, administrators, and parents effectively communicate to share pertinent information about specific pupils and groups of pupils?

F. Classroom management of students, equipment, time, supplies, etc.

G. Keeping up to date: how can the teacher evaluate new materials, avoid professional stagnation, etc.

Many other questions, of course, cut across curriculum and grade lines -- questions of organization, administration, and philosophy. Many could be treated within the above topics. For example, a part of a program dealing with better use of the teacher's time could show how a computer can be used to build a master schedule. A program on dealing with individual differences might introduce a new approach to stimulating creative thinking in all children.

Program Structure and Production Techniques

The diversity of material to be worked with is such that a high degree of flexibility in format will be called for in the production of the proposed series. The sample film "Mainly for Teachers" illustrates one approach. The cinema verité style of filming the classroom scenes commends itself because both children and teachers will usually be more believeable. Some situations, however, will require a more highly structured approach in advance of filming.

For reasons of visible authenticity and to provide continuity from program to program, it is recommended that an educator with some degree of national recognition serve as narrator and commentator for the entire series. Ideally, he should be actively involved, not only in writing his own narration, but in planning both the series and each program. Such an assignment may, however, be impractical for one person. Consideration should, therefore, be given to the desirability of sharing these responsibilities among several educators. Under one possible arrangement, each member of, say, a three-man team would supervise the production of a specified number of programs and appear on film as their narrator. Alternatively, one man could take editorial responsibility for fewer programs and appear as narrator for all, i.e., those supervised by his colleagues as well as his own.

Program Length and Frequency

It is recommended that each program be 28½ minutes in length and scheduled for broadcast once a week.

Scheduling

Scheduling possibilities will vary depending on the circumstances under which the program is distributed. If, as visualized in the original proposal for the study, a nationwide commercial network makes time available for the series, it can be expected that the time availabilities will be limited to off-peak viewing hours. This is not necessarily disadvantageous. Of great concern is the question of teacher availability. Conventional thinking suggests "prime time" as desirable. This does not hold true for a specialized audience that needs to be able to view regularly at a time when other demands do not compete.

The experience of the National Broadcasting Company with Continental

Classroom indicates that an audience does assemble in substantial numbers at 6:30 or even 6:00 on weekday mornings if the motivation is sufficiently high. Since we are, however, proposing a once-weekly program, a preferable choice would be a somewhat later hour during the weekend. The optimum realistic time period is probably 9:00 or 9:30 on Sunday mornings.

If a nationwide interconnected educational or public television network is operational by the time the series is ready for broadcast, a later hour might be made available.

Referring once again to the experience of *Continental Classroom*, it is clear that simultaneous broadcast by the stations of a nationwide network offers many advantages in terms of audience building possibilities through promotion, both on the air and in other media. No other form of broadcast has the same impact. Furthermore, simultaneous broadcast greatly enhances the promotional value of teachers' guides and information distributed through the channels of cooperating educational organizations.

Promotion and Utilization

While it is difficult to prescribe exactly how much of what ingredients are required to make an effective television series, the absence of certain elements can almost certainly guarantee failure. One such element is adequate dissemination of information. Many well-conceived and well-produced educational and informational programs have not reached their intended target audiences, largely as a result of insufficient provision for advertising, publicity, and program promotion.

Beyond exerting every effort to reach the educational community through traditional public and professional channels of communication, major consideration must be given to the preparation and distribution of collateral materials for use with the television programs. Such materials could include, but not be limited to, schedules, posters, syllabi, reading lists, new research results, teachers guides, possibly even a paperback anthology of innovation containing excerpts from writings of major educational theoreticians, e.g., Piaget, Bruner.

Careful consideration must be given to the possibility of so structuring the series that -- in conjunction with other requirements -- it might be offered for academic credit as an extension course by schools of education and for in-service credit by school systems throughout the country.

* * * * * *

There can be no serious doubt that contemporary turbulence in the world of education is a precursor of even greater change to come. The nature of the change will depend on many conditions derived from the larger society, of which education is but one institution. The educational community can help give direction to the future by the degree of its understanding of current change.

One means of reducing the traditional lag between inception and acceptance (or rejection) of new ideas and improved techniques in teaching has been outlined in this report. It provides an opportunity in the area of public and private relationships to unite the resources and skills of education with those of a major communications industry in pursuit of a common goal.

SUMMARY

How can teachers, school administrators, members of school boards, and interested parents become familiar with the substance, the scope, and the significance of recent educational innovations? How can they see for themselves what happens in the classroom when the results of educational innovations are put into practice? The millions of people involved in making educational decisions require up-to-date information about changes being introduced in the world of education.

A significant communication gap is recognized between the producer of new educational ideas and the practitioner, a gap that could be bridged through network television, which has demonstrated its capacity as a transmitter of information. The Mass Media Feasibility Study was designed to explore how television might be used most effectively to enhance the professional skills of the American teacher.

The study was conducted in three phases. The first two involved gathering information, and the third consisted of actually going through the process of making a film.

In Phase I, contacts were established with several hundred people involved in research, development, and innovational practice. This was done through consultation, field visits, correspondence, and an informational self-mailer suggestion sheet distributed through the mailing lists of the National Association of State Directors of Teacher Education and the American Association of Colleges for Teacher Education. Descriptive materials concerning more than 125 innovational activities have been studied,

and abstracts of 58 projects are contained in the present report.

It was evident from the response that a television series on innovation would not suffer for lack of subject matter. But the range and diversity of the material raised another problem: How to attract and hold an audience of teachers, with their own diverse interests and areas of specialization?

A second self-mailer questionnaire was designed for distribution to practicing teachers, through facilities of the National Commission on Teacher Education and Professional Standards of the National Education Association. This questionnaire explained the purposes of the feasibility study and asked for guidance in determining the primary interest areas that the teachers felt could best be served by a television series addressed to them.

The teachers were able to respond to 39 specific areas of possible interest, grouped under four broad headings: (1) Meeting the Intellectual Challenge of Teaching; (2) Forming a Human Partnership with Children; (3) The Teacher and the Community; and (4) Professional Concerns of the Teacher. By far the greatest number of expressions of interest were in areas (1) and (2). Particular emphasis was placed on the teachers' desire to learn how to do a better job in encouraging curiosity and independence of thinking, challenging the superior students, helping children learn to accept responsibility, and dealing with underachievers.

These responses suggested that the proposed television series be organized around teaching problems, rather than around curricular area or grade level. The sample film was designed to demonstrate several ways in which the motivation of youngsters could be enhanced. Illustrative classroom material was filmed in a third-grade class using materials of the Science Curriculum Improvement Study and in a ninth-grade class testing materials and approaches of the High School Geography Project of the Association of American Geographers. The film shows how even very young children can grapple with complex ideas through the medium of thought-stimulating materials, guided by a teacher who asks provocative questions. The film also demonstrates how teenagers who are very much involved with themselves can become involved with abstract subject matter through the device of role playing.

Based on the findings of the study and on the experience of producing the sample film, the report recommends launching a television series directed to the educational community in which current innovations are presented in their context as means to help teachers do a better job, not as ends in themselves. By approaching the task through the problems that all teachers face, such a series could be of interest to all teachers irrespective of the grade level at which they teach or their areas of subject matter specialization.

APPENDICES

APPENDIX A

MAINLY FOR TEACHERS

Transcript of a sample 16mm color film
for a television series addressed to
the American educational community

Produced pursuant to a contract with the
U. S. Office of Education under the provisions
of Title VII-B of the National Defense Education Act

by

Mass Media Feasibility Study

Arthur W. Foshay
Edward Stanley
Gloria Kirshner
Lawrence Creshkoff, Project Director

1967

Teachers College • Columbia University

New York, New York 10027

MAINLY FOR TEACHERS

(Four 3rd-grade children are looking animatedly at an 8mm. projector screen. First one points to the screen, then another. The atmosphere suggests high interest and excitement.)

DR. FOSHAY (off camera)

How do you get children involved in their own learning?

(CLOSEUP of screen discloses a girl walking around the inside of a large cylindrical structure suggestive of a wooden water main.)

VOICE OF TEACHER

Can you go upside down and walk around like that in the barrel?

VOICES OF CHILDREN

No ... No! (Near unison)

(CLOSEUP of girl looking intently at something happening in a beaker.)

DR. FOSHAY (off camera)

The great thing is to try to see things through the children's eyes.

(MEDIUM CLOSEUP of a teen-aged boy in another class speaking with some fervor.)

BOY (with emphasis)

I would like to again restate that at the time, Great Britain was the legal government of Canada ... (Voice fades under)

DR. FOSHAY (off camera)

Today, we're going to look at one of the most perplexing problems of them all: Motivation.

(FADE TO BLACK. Opening titles are superimposed over three successive classroom scenes.)

(Opening Titles)

MAINLY FOR TEACHERS

presented by
U.S. Department of Health, Education, and Welfare
Office of Education
Division of Research Training and Dissemination

with ARTHUR W. FOSHAY
Associate Dean, Research & Field Services
Teachers College, Columbia University

(DISSOLVE to Dr. Foshay in his office. He is seated at an L-shaped desk, on which are located several items used in the Science Curriculum Improvement Study and the High School Geography Project: an 8 mm. film cartridge, "Mr. O," and several HSGP "Guidelines.")

DR. FOSHAY

"Motivation" is a big, loose, complicated idea. We're going to look at some of it. How can students become motivated to learn? The answer depends on many personal and family considerations, of course, but also on at least these three conditions, which we teachers control directly:

First, how we conceive of the subject matter; second, what teaching methods we use; and, third, what learning methods we propose to the children -- that is, how they are to carry on their learning.

(DISSOLVE to a succession of classroom scenes, with emphasis on closeups of children's faces appropriate to the text: verbal, non-verbal, eager, withdrawn, etc. Some of the faces are of third-graders, some are of ninth-graders. The commentary continues off camera.)

DR. FOSHAY (off camera)

Anybody who has ever faced a classroom, no matter what the age or background
of the youngsters, knows the big difference between the youngsters who stay
close to everything that's going on, and those who don't. We have lots of
names for those who don't. We call them "reluctant learners" or "the non-engaged."
These names tell us little; in the main they just reflect our anxieties.

When children are motivated to learn what you hope they'll learn, they show it in all kinds of ways. The verbal ones show it by being verbal. Some of the non-verbal ones show it by the way they sit, or the way they look at you, or by an occasional comment.

They come in all sizes. Some look eager and bright-eyed; some, withdrawn or tired, or hostile, or preoccupied.

(On camera) When we teach, we try to reach all the children, no matter what their differences. We said that the way we conceive of subject matter has a lot to do with motivation. Big ideas are intrinsically more attractive than trivial ideas. One reason children aren't motivated to learn is that the idea involved simply may not be worth it.

We are going to look in on an elementary school class that is working on a very big idea indeed - the concept of relative motion, one of several ideas that are basic to a later understanding of relativity itself.

As part of the Science Curriculum Improvement Study, a special 8 millimeter film loop - like this one - has been prepared for the children. It presents some puzzling raw materials calculated to catch them by the mind.

(Off camera) Now let's join Mrs. Christina Kageyama in a third-grade class at the Washington School in Berkeley.

(CUT to classroom scene during preceding sentence. Mrs. Kageyama is calling four children to come to the front of the room while the rest of the class continues with other work. The four pupils join Mrs. Kageyama at a low rectangular table, where an 8mm projector and screen are already set up. The children's attitudes suggest that they have done this many times before; there is even some horseplay.)

MRS. KAGEYAMA

Okay. I'm going to ask Keith to run the projector for you, and I want you to watch just this part of the Fun House film ... and I'll come back in a little while and we'll talk about it. All right?

(Mrs. Kageyama hands loop cartridge to Keith and leaves. Keith loads projector and starts it. The whirring sound of the motor is heard. This is the same group we saw at the opening of the film. As they discuss what they see, the camera picks up what they are looking at: again, some children walking around the inside of a large cylinder.)

JOE

I think they isn't going around, but that house is.

SARAH

Yebbut, this is the thing that's going around.

TAMMY (pointing)

This is the thing that's going around. The house looks like it's going around.

SARAH (chuckling)

But it's not.

JOE

Mr. O's standing still.

SARAH

Oh, I think I know. I think I know what it is. Maybe it has some kind of gravity at the feet ... that pulls on the feet.

JOE

What if they turn it off? (Chuckle)

(Mrs. Kageyama returns to table and turns off projector.)

MRS. KAGEYAMA

Now, I notice you've been discussing it. Now, you saw some children. Where were these children?

CHILDREN (overlapping)

In the tunnel ... at the Fun House.

MRS. KAGEYAMA

In the tunnel ... or barrel. What was the barrel doing? Do you remember?

CHILDREN (together)

It was going around and around ...

MRS. KAGEYAMA

How do you know it was going around?

JOE

Because it looked like it.

MRS. KAGEYAMA

Do you have any evidence? (Sarah raises her hand.) Sarah?

SARAH

I saw outside ... other things were going around.

TAMMY

It looks like they're going to fall off when they go upside down.

MRS. KAGEYAMA

Oh, they go upside down? Well, is that possible? Do you remember that scene where the girl is going around? Does anyone think that maybe she didn't go around like that? What do you think, Joe?

JOE

You can make it like it was going around.

MRS. KAGEYAMA

What would happen if you went around like that? What would happen to ... maybe ... you know ... what would you look like if you walked upside down?

JOE

I don't know.

KEITH

I don't know. I never walked upside down.

MRS. KAGEYAMA

What would happen to your hair, Sarah?

SARAH

It would go (points down, giggling) straight down, but ...

JOE

But that boy's hair didn't go straight down.

TAMMY

The girl's ...

MRS. KAGEYAMA

The girl's...

JOE (puzzled)

I didn't see no girl's hair go down. (Laughter.)

MRS. KAGEYAMA

What else did you see? Where do you think the camera was? Keith, where do you think the camera was.

KEITH

At the other end ... wherever that was.

MRS. KAGEYAMA

At the other end, wherever that was. Did you see the camera in the picture at all?

CHILDREN

No ... no ...

TAMMY

But, when they come to the stand ... it goes around ... this man keeps sitting on there. He takes pictures of them ...

MRS. KAGEYAMA

He takes pictures of them. Okay. Did you see anything ele?

JOE

No.

TAMMY

I saw Mr. O!

MRS. KAGEYAMA

You saw Mr. O?

JOE

Yeh, there were two of them.

MRS. KAGEYAMA

Where was Mr. O?

KEITH

He was near the house ... at the other end.

MRS. KAGEYAMA

All right, there was a Mr. O near the house. Was there any other Mr. O?

JOE

Yeah ... one in the barrel.

(CUT to Dr. Foshay.)

DR. FOSHAY

The bridge between the child and the idea is what we usually call teaching method. In this case, the teaching method suggested by S.C.I.S. is represented in part by "Mr. O" - for "Observer." (Picks up Mr. O from desk to show.)

Mr. O's function is to render an abstract idea into concrete form. The child is asked to tell how Mr. O would describe a situation. Mr. O can only report where things are in relation to where he is, or how things are moving from his point of view. Mr. O is designed to help overcome the egocentrism of the younger child, who is unable to grasp points of view other than his own.

(CUT back to classroom.)

MRS. KAGEYAMA

All right. Think about the Mr. O in the barrel. Everyone thinking about the Mr. O in the barrel? What would he report about the children, say the girl? What would he report about the girl that walked around the barrel? You remember? Maybe we can ... (Sarah raises her hand.) Sarah?

SARAH (haltingly)

"The girl ... is .. in front of me ..."

MRS. KAGEYAMA

Was she always in front of him?

SARAH

Yeh ...

JOE

No ...

SARAH

... because he was on the barrel going around with her ...

JOE

Uh-uh ... because the girl was walking and Mr. O stayed there.

SARAH

Yeah, but the barrel went around.

JOE

I know, but the girl didn't always stay with him.

SARAH

Oh ...

MRS. KAGEYAMA

Well, maybe we can look again and see what we think about that. Okay? (Keith turns on projector.) Very good ...

CHILDREN (overlapping)

See .. see ... the Mr. O ... the Mr. O ...

JOE

See, the girl's walking all the way around. Hey ... (smiling) ... her hair didn't go down!

TAMMY (turns to Joe)

See - you said it was a boy.

MRS. KAGEYAMA (stops projector)

Okay. Good. What do we find out from looking at it again?

CHILDREN

Mr. O just stays there ...

MRS. KAGEYAMA

If there was a Mr. O on the camera, where would that Mr. O be? Do you have any idea? That's a harder question. . .

JOE

It'd be in the sky.

(CUT to Dr. Foshay.)

DR. FOSHAY

One answer to the question of motivation is to be found in materials of this sort, which represent a puzzle that's really worth trying to solve. Another answer is in Mrs. Kageyama's teaching style. It's a probing style. She keeps the children moving all the time with her questions. Each question is tied to the child's previous response.

(CUT to closeups of each child in turn.)

(Off camera) According to their teacher, Sarah responds well to just about everything ... Joe does well in science, but is harder to work into a group ... Keith generally likes to work on his own ... and Tammy is ordinarily quite hard to draw into a group.

(CUT to Dr. Foshay.)

But all four were caught up in this episode. Why?

The children were dealing with important, therefore intrinsically rich, subject matter. The subject matter was presented as a problem to be solved. The teaching method helped to bring an abstract idea within the child's reach ... enabled him to understand clearly. The teacher's questioning kept the children thinking. After all, if someone is already giving you the answers, you don't have to try to solve the problem. And another factor was the interaction among the children. We'll come back to that.

Now we're going to see Mrs. Kageyama working with another group from the same third-grade class on another kind of phenomenon.

(CUT to closeups of new group of children.)

(Off camera) This time we'll meet: Eric ... likes to participate. Joyce ... needs to be drawn out. Wesley ... much more quiet. Neal ... works well on his own, but not always in a group.

(CUT to Dr. Foshay.)

Of course, the children could work alone, each interpreting the phenomenon for himself. In this case, interaction among the children is basic to the teaching plan.

(DISSOLVE to new group.)

(Off camera) When children interact, they build on one another's ideas ... Again, Mrs. Kageyama ...

(Back at the classroom table, the projector and screen have been moved aside. Mrs. Kageyama leans over with a plastic pitcher in hand. The children inch forward to see what's happening.)

MRS. KAGEYAMA

Now, I have this beaker, and I'm going to fill it with some water. (Pours.) That's fine. Yes, let's get a good look. Okay. (Places can on table and takes something from it.) Now, you know what this is?

CHILDREN

Yes ... corn ... popcorn ...

MRS. KAGEYAMA

Popcorn. Yes. Wesley, you want to put some of this popcorn into the water for us? (He does.) What's happening to them?

WESLEY

They're going to the bottom.

MRS. KAGEYAMA

They're going to the bottom.

NEAL (overlaps)

They're sinking ...

MRS. KAGEYAMA

Now, we're going to add something else ... put something else in there. (She brings out a small package.) What's this?

CHILDREN

Alka-Seltzer ...

MRS. KAGEYAMA

Alka-Seltzer. Joyce, want to put the Alka-Seltzer in? (Much mirth by children.) Let's see what happens.

ERIC

They're going to fizz up!

MRS. KAGEYAMA

They're going to fizz up. Well, let's see what happens.

ERIC

Oooh, Boy!

MRS. KAGEYAMA

Is it fizzing up like you predicted?

ERIC

Yeeah. Yeeah ... like the Fizzies. Hey ... the corn things, when they get in those fizz bubbles, are lifted up to the top.

WESLEY

And then they go right back down.

JOYCE

It seems like it's raining.

ERIC

It's going up, and it's staying too, now ...

MRS. KAGEYAMA

What's going up?

ERIC

The corn ... the corn ...

JOYCE

Little things are popping out of the top.

MRS. KAGEYAMA

Let me move it over just a little closer.

WESLEY

Interesting! ...

MRS. KAGEYAMA

Let's watch and look at the corn ... and see what happens to the corn. Look very closely.

NEAL

All the fizzy stuff pushes it up.

MRS. KAGEYAMA

Does it stay up all the time?

NEAL

Yeah ... Not all of it. It'll sink after the fizz stops.

MRS. KAGEYAMA

It will sink after the fizz stops.

ERIC

Yeah ... see ... (Mirth.) ... They look like turtles, sort of like ... diving down ...

WESLEY

Ooh - that looks like a submarine.

MRS. KAGEYAMA

Why do they go down and then come up again?

NEAL

Because they ... they get ... because the fizzing doesn't go on and on ... The fizzes go all over the place, so if for a minute there isn't some fizzing going up in a place, then they start sinking, but as soon as the fizzing starts in that place again, it'll push it up ...

MRS. KAGEYAMA

Joyce, what do the pieces of corn look like now? Do they look any different than at the beginning?

JOYCE

No ...

MRS. KAGEYAMA

Can you look closely at these? How do they look?

JOYCE

They have bubbles on them.

MRS. KAGEYAMA

They have bubbles on them? What happens to the bubbles? Do the bubbles stay on them all the time?

ERIC

When they get up to the top only the part of the corn that is under water has bubbles on it.

MRS. KAGEYAMA

What happens to the bubbles?

JOYCE

They pop .. they pop ...

ERIC

They disappear when some of it's out of the water.

(TIGHT CLOSEUP of popcorn and bubbles.)

WESLEY

It looks like it's a bee's eye.

(CUT to Dr. Foshay.)

DR. FOSHAY

Once more the children have been given a wide-open problem to solve. Mrs. Kageyama's teaching strategy is the same: let the phenomenon speak for itself, and guide the children's observations and thinking with questions.

(CUT to scene of high school students entering class.)

(Off camera) Now let's look at a ninth-grade geography class at Sequoia High School in Redwood City, California. As with the elementary class, the problem here is to make a fairly abstract concept come alive ...

(CUT back to Dr. Foshay.)

... the concept of "boundary." It's a rich idea if we will recognize its universality and its dynamic quality. National boundaries - like the Berlin Wall - involve basic human attitudes. They are defined, in the last analysis, by the interplay of forces. Territoriality - the need to have your own turf - is a primitive need man shares with the animals. How do you make the concept boundary into a problem worth exploring?

In this case, it's been made into a hypothetical border dispute between the United States and Canada.

(CUT to ninth-grade class at Sequoia High School.)

(Off camera) The teacher is Mr. Lloyd Gordon. Mr. Gordon is testing materials from the High School Geography Project of the Association of American Geographers.

(Mr. Gordon is introducing the lesson from the front of the room, moving between his lectern and a wall map of the United States and Canada.)

MR. GORDON

(Fade in sound) ... and in this, we want to try to analyze what would happen between two countries if they wanted to try to change a boundary. How would the people feel who lived right along the border? How would your diplomats react? How would the Canadians react? This is the kind of thing ... Are people really intersted in boundaries.

(As Mr. Gordon continues his explanation, the camera scans the class.)

DR. FOSHAY (off camera)

Those are the issues to be examined. But remember, Mr. Gordon is working with adolescents, not abstractions. Here are 30 very different individuals at a time in their lives when what goes on in class has to compete with the volcanic events taking place in their private worlds. How can their teacher reach them?

(The camera zooms in slowly on Mr. Gordon during a quiet moment as he peruses the class thoughtfully, followed by closeups of each of the students identified by Dr. Foshay.)

Here's Scott, a hard worker, who's always in there, trying ... Debbie is often ahead of the rest of the class ... Jim is quiet, but likes to be in group discussions ... Pam is on the quiet side ... Joe is full of energy and likes to be doing things ... Shirleen takes part actively in whatever is going on ... Don wants to go into politics ...

Bill ... Linda ... Curt ... Cynthia ... Tom ... Marjorie ... Pedro ... Gary ...

(Slow camera pullback from Gary to show most of class.)

These young people will never again be as different from one another as they are right now. But a good many of their habits, as far as school is concerned, have already been well established. The youngster who isn't in the habit of participating in class at this point is a little difficult to draw out. And of course, some of the others are in the habit of participating in everything all the time.

(CUT to Mr. Gordon at lectern.)

MR. GORDON

(Fade in sound) ... and now there is a controversy between our two countries, and ambassadors and diplomats are beginning to meet. Now, this is the role that you are going to take. You are going to become the diplomats to argue this out. Part of you are going to be a U.S. team, and part are going to be a Canadian team. Then we're going to have an arbitration board that will sit and listen to your arguments. So, to start with right now, I'd like to give out the roles of the U.S. and Canadian teams ...

DR. FOSHAY (off camera)

Mr. Gordon is going to use a very potent motivational procedure, role-playing.

MR. GORDON

So, for James Tiger Simmons on the Canadian team: he's a native of London ... ex football player ... something of a man about town. For this role today, I'd like to have Tom Hill. Step up, Tom ... (Fade sound under.)

(As each student's name is called, he steps up to the lectern to receive descriptive notes about the role he is to take.)

DR. FOSHAY (off camera)

Teaching is first and last an affair of human interaction in which both teachers and students use themselves as instruments. I suppose that the key question for any teacher is: Do I want the children to act more like human beings when they try to learn what I teach - or more like animals in a conditioning experiment? Most of the little motivational tricks we hear about insult the children's humanity. The carrot and stick is for donkeys, not people. I doubt that anyone ever really used it, even on a donkey.

What we have here is a rich concept presented as a problem, and a teaching device that is profoundly human - role-playing - which requires the student to throw himself into the subject matter he is learning.

(DISSOLVE from handing-out of roles to class studying, with Mr. Gordon answering questions from time to time.)

To prepare for their roles, the students consult primary source materials: maps of the disputed territory, copies of the relevant treaties, demographic information, and so on.

(FADE IN sound from class. As Mr. Gordon moves from one boy's desk, a girl raises her hand to ask a question.)

MR. GORDON

Yes, Debbie?

DEBBIE

Was this a real situation?

MR. GORDON

Real situation? You mean this gold discovery?

DEBBIE

Yes.

MR. GORDON

Sounded real, didn't it, coming over the tape ...

DEBBIE

Well, yeah ... but did it really happen?

MR. GORDON

No, this is a mythical case, but one that's very plausible. As you know, all through our High School Geography Project, most of this has been based on facts, but then just arranged so that you get involved in it.

DEBBIE

Then it didn't really happen?

MR. GORDON

It didn't really happen, no. But it could happen. (Fade sound under.)

(Mr. Gordon continues to respond to Debbie.)

DR. FOSHAY (off camera)

It's becoming real to Debbie.

6

It's impossible to be impersonal about role-playing. The teacher can reveal himself as much as the students do; he therefore has to be aware of his behavior. It's hard to equal the impact a teacher has in this situation.

(The camera moves from the teacher and once again scans the class.)

As a teaching device, role-playing has a very special quality. The student has to work with himself, since there isn't anything else to work with. He has to project himself into role-playing if he undertakes it at all. It is profound and deeply involving ... and not to be trifled with.

(DISSOLVE to rearranged classroom with two rows of students facing each other from opposite sides, the chairman of the session in the center, and the remainder of the class behind him.

(Off camera) Now, into the role-playing. On one side, the United States team. We hear first from the spokesman for Canada.

SHIRLEEN
(portraying the role of Lucienne La Fleche,
a renowned scholar of international law)

Well, I think the first treaty in 1783 was very vague. It says, ".. the two highlands," one South and one more Northerly. If it is the first highland, then Canada gets the gold, and we think it is the first highland. The United States hasn't developed the land in all the time it's had it there, and they could say that Canada doesn't need the land because we have all the extra land. Well, the United States hasn't used it at all - there's nobody living there at all. The French Canadians live there and they need the land.

DON
(as Duke Derrick, ex-Governor of Oklahoma and
roving U.S. ambassador)

I'd like to thank Shirleen for a most magnificent emotional argument. She has one slight problem in her statements though. They have no basis in fact. Unfortunately, our claim to the border was much further North than she seems to allow it. And we settled with Great Britain, the people who at the time were ruling the country, to move our border back further. Now, here it's a rather moot point in international law that a treaty made by a sovereign government over a colony is still binding after independence. There is no basis for suit. (Murmurs of dissent from the Canadian side.) You have been an independent government for approximately sixty years; you finally decided to contest it. There's no case.

SHIRLEEN

Our main argument in this whole thing is that we had nothing to say about this treaty at all. We were not called in, invited, or anything. The treaty was really between the U.S. and Great Britain. We didn't have anything to say about it, and we weren't invited, and we think this is ridiculous ...

SCOTT
(as "Boss" Ryan, former mayor of a midwestern city)

We can't help it if your country was being dominated by Great Britain at the time of the treaty. It's not our fault just because you guys didn't work for your independence the way we did.

DON

If your government decides that it's good for you to give up the land, there's nothing we can do about what your government does. We're not responsible, and you're still bound by a treaty signed by your sovereign government - no matter what emotionalist arguments you happen to come up with. There's no legal basis for this case at all.

DEBBIE
(as Ruth Machiavelli, member of
the Canadian Parliament)

They aren't our sovereign government.

DON

They were at the time of the treaty. (Many voices raised in dissent.)

CURT
(the chairman)

One at a time ... Duke! Duke! One at a time!

SHIRLEEN

This petty slandering that's going on between the two governments - all we're doing is cutting each other down all the time. I think we should just start in trying to figure out a treaty between the two of us because this is getting ... the petty slandering is sort of babyish!

(CUT to U.S. team where Don slams desk in annoyance. Camera pans class to search out the less involved.)

DR. FOSHAY (off camera)

But what's been happening to the rest of the class? As you might expect, there are some youngsters who look as if they were trying to be invisible. To spread participation, Mr. Gordon shifts a few roles and draws in some of the youngsters who don't usually volunteer.

(DISSOLVE from Mr. Gordon directing the changes to Canadian team lineup. Shirleen has been replaced in the role of Lucienne La Fleche by Marjorie.)

MARJORIE

It's taken Canada only 60 years to realize that this land belongs to her. But how long has it taken the United States to realize that there's gold there? It's taken them 119 years, and it's still underdeveloped. If they had developed it, they'd have found the gold a lot sooner. Canada doesn't have that much money, and if we had this gold it would help us ... help our country a whole lot. We could develop a lot of places that are underdeveloped.

PAM
(as Mrs. Percy Hightower, of the U.S. team)

A little bit of gold was discovered six years ago, and the rest of the gold was just discovered a little while ago. How can we do anything about it when it was just discovered?

DEBBIE

Yeh, but if you had worked to develop that land when it was there all along, you would have found the gold a lot sooner.

SCOTT
(now as a private U.S. citizen)

We have really had no great use for that land until recently, because the population has doubled in the last - so many years, and that makes that land even more valuable.

CURT

Can we have any comments from the teams here? ... Any questions?

SHIRLEEN
(now as a private Canadian citizen)

Well, may I point out that in the Treaty of 1783 it says, I quote, "Following the line drawn due North of it to the highlands and along the highlands which divide the rivers that flow into the Atlantic Ocean ..." and if you will look at the map, it shows that there are two highlands. And it does not state whether it is the first highland or the second highland, and we say that the border is on the first highland. Therefore, the gold is ours.

DON
(now as a private U.S. citizen)

The Webster-Ashburton Treaty was distinctly designed to clarify that issue. If you like, I will read it to you. (Sarcastically)

SHIRLEEN

(Huffily) I am quite capable of reading, Mr. McDonald ...

CURT

Let's hold it. Wait - we're getting out of hand here. We've already gone over this about five times. Let's try something else ... a different approach.

DEBBIE

We feel that we should be able to go back and at least discuss the treaty again, because we were under our sovereign government then and we had nothing to say in it. Now that we are free and that we are our own government, we feel that we should be able to go back and at least discuss it again and come to some kind of a compromise .

DR. FOSHAY (off camera)

And eventually, a good many of the students expressed themselves.

CYNTHIA
(U.S. team)

Even if gold were found by the U.S. company, the money would not go to the U.S. company. The same goes for Canada ...

TOM
(private Canadian citizen)

We have used all the land around and about the Great Lakes, and stuff. We've used most of it that was any good. So finally we decided to take some land, and we decided to use it, and you guys start to object. You guys haven't used it at all!

BOB
(U.S. team)

We just found gold recently - about six years ago - and if no gold was found, they wouldn't have said anything about it.

JIM
(U.S. private citizen)

Isn't the gold mining company owned by Canada and U.S.? Shouldn't they sort fo split it up some way?

(CUT to Dr. Foshay)

DR. FOSHAY

Another way to involve students in their own learning is to ask them to evaluate it. Evaluation is, of course, part of the learning act. When a student does his own evaluating, it's very different from the teacher's doing it for him.

(CUT to class, where Mr. Gordon is about to interview Don, Gary, and Pedro.)

(Off camera) Mr. Gordon asked some of the students what they had learned from the lesson.

(CUT to Don's face, over Mr. Gordon's shoulder.)

DON

Well, it gives you an idea of the workings behind the system. Whereas generally you just see the outside and what the results of it ... This way it gives you a general idea of what's going on inside.

(CUT to Gary.)

MR. GORDON

What did you think that the main thing that you learned from all this lesson was?

GARY

Well, that it could actually happen, and how to cope with it if it did.

(CUT to Pedro.)

MR. GORDON

What do you think was the main thing that you learned from this lesson?

PEDRO

Well, I learned a lot about compromises and stuff like that, you know. That's about it.

(CUT to Mr. Gordon)

DR. FOSHAY (off camera)

He then asked whether they had learned anything about themselves in the roles they had played.

(CUT to Don.)

DON

Well, I enjoyed doing it. It has ... some knowledge given out ... Yes.

MR. GORDON

I mean, just strictly about how you, yourself, are.

DON

You learn what you enjoy doing.

(CUT to Gary.)

MR. GORDON

Do you think that you learned anything about yourself in this role-playing situation?

GARY

... Not especially.

(CUT to Pedro.)

MR. GORDON

Do you think that you learned anything about yourself - you, yourself, personally - did you learn something by having this chance to play a role?

PEDRO

Yeah ... I can talk better in front of the class now.

(CUT to Dr. Foshay.)

DR. FOSHAY

The youngsters tell you important things at a blinding rate: a glimpse here, a word there, and it's gone. If we only have the ears to hear it while it's going by!

(CUT to Don.)

(Off camera) Don wants to enter politics, so he talked about something political - the system.

(CUT to Pedro.)

Pedro raised the curtain - just for a second or so: "I can talk better in front of the class."

(CUT to class group.)

Both boys talked about something basic for them. But you have to be listening or you'll miss it. These little glimpses are the leads the youngsters give us - the leads to what is potentially there.

(DISSOLVE to Dr. Foshay.)

(On camera) For the promise of the approaches we've been looking in on is, in the last analysis, the promise of the human quality itself - the ability to think, not merely to react - that these children were born with.

These approaches, illustrated by the High School Geography Project and the Science Curriculum Improvement Study, are not panaceas. You will have noticed some questions we haven't touched:

Are they really good for all the children? Can a teacher really maintain this pace? How can you tell what children really know when you've done things like this with them?

No matter what we are teaching or what the ages of our students, what we really seek to develop among the children entrusted to us is the ability to think. For learning to think is the way you grow into your humanness, and the feeling of growth is the best motivator of them all.

We've seen some ways to do it:

- by exciting them with subject matter worth thinking about, presented as a problem worth solving;
- by using teaching approaches that encourage them to seek answers, to inquire, instead of merely memorizing;
- and by devising strategies for learning that actively involve the youngster in the subject matter, and in himself, and in the evaluation of what he has gained by being involved.

The crux of it is that what we call well-motivated learning is really a child's attempt to grow up - to include more within himself. Any child has a lust for growth. As Loren Eisely says, "The teacher is fighting for an oncoming future."

(FADE to black. Fade into closing titles and credits superimposed on a succession of reprise scenes.)

(Closing Titles)

MAINLY FOR TEACHERS

with ARTHUR W. FOSHAY
Associate Dean, Research & Field Services
Teachers College, Columbia University

Teachers
CHRISTINA KAGEYAMA
LLOYD A. GORDON

Classroom filming
DAVIDSON FILMS, San Francisco

Editorial services
PRODUCTION CENTER, INC., New York

Produced by
MASS MEDIA FEASIBILITY STUDY
Teachers College, Columbia University

Steering Committee
ARTHUR W. FOSHAY
EDWARD STANLEY
GLORIA KIRSHNER
LAWRENCE CRESHKOFF
Project Director

We gratefully acknowledge
the cooperation of
ROBERT E. BIGGS
Sequoia High School
Redwood City, California

SUE FRY
HERBERT WONG
Washington School, Berkeley

NICHOLAS HELBURN
High School Geography Project

CHARLYN SHEEHAN
HERBERT D. THIER
Science Curriculum Improvement Study

(Closing Titles, continued)

For further information, apply to:

SCIENCE CURRICULUM IMPROVEMENT STUDY
University of California
Berkeley, California 94720

HIGH SCHOOL GEOGRAPHY PROJECT
P.O. Box 1095, Boulder, Colorado

MAINLY FOR TEACHERS has been produced pursuant to a contract with the U.S. Office of Education under the provisions of Title VII-B of the National Defense Education Act. MCMLXVII.

APPENDIX B

A PARTIAL INVENTORY OF INNOVATION

The accumulated resource materials in the Mass Media Feasibility Study files at Teachers College contain information about a wide variety of innovational projects and activities. The 58 projects described in the abstracts below are representative. Some are well-known programs, financed by foundation grants or government contracts; others are small-scale activities that have attracted little attention on a national scale. Some are included simply as representative of a class, with no qualitative ranking implied.

I. Abstracts

For convenience, the projects described here are grouped according to the following functional categories:

A. Curricula and Instruction
B. Instructional Technology
C. Education for the Disadvantaged
D. Teacher Education and Recruitment
E. Cooperative Research and Development
F. Staff Use Patterns
G. Operational and Program Organization
H. Facilities Design, Architecture, Furnishings

A. Curricula and Instruction

1. Anthropology Curriculum Study Project. 5632 Kimbark Avenue, Chicago, Illinois. Malcolm Collier, Director.

   Units in development to introduce high school students (Grades 9-10) to data on human history and behavior and to some of the modes of inquiry characteristic of anthropology. Topics include: bio-cultural evolution, human pre-history, varieties of human societies and cultures, anthropological concepts relevant to historical events, case studies of modern societies, human diversity. Maps, slides, casts, archaeological evidence cards, teachers' handbook, teacher training films. Abington H.S., Abington, Penna.; Calumet H.S., Chicago; Lake Washington H.S., Kirland, Washington.

2. Biological Sciences Curriculum Study. P.O. Box 930, Boulder, Colorado. William V. Mayer, Director.

   In an effort to update and improve high school education in biology, three parallel first-year courses (Grades 9-10) and one second-year course (Grade 12) have been developed. Special materials for lower-ability students cover same themes as primary courses, but at slower pace and with more varied repertoire of teaching techniques. Investigation and discovery through more laboratory work and universal principles rather than applied aspects are emphasized. Texts; experiments; teachers' handbooks; tests; film loops; teacher preparation films. Widespread use, including Baltimore, Detroit, and Houston schools.

3. Chemical Bond Approach Project. Department of Chemistry, Earlham College, Richmond, Indiana, Laurence E. Strong, Director.

Chemistry presented as process of investigation, with imaginative ideas used to interpret laboratory findings. Students (Grades 11-12) work in three steps: (1) pre-Lab, for research in text and class discussion of ideas; (2) Lab, where students formulate own methods; (3) Post-Lab, discussion of result. Text; laboratory guide; teachers' guides; examinations; supplementary readings; supplementary self-instruction programs. Marple-Newtown H.S., Newtown Square, Penna.; Roxbury Latin School, West Roxbury, Mass; Warren H.S., Downey, Calif.

4. Chemical Education Materials Study. Lawrence Hall of Science, University of California, Berkeley. George C. Pimentel, Director.

A curriculum revision project for high school chemistry (Grades 11-12) directed toward reducing separation between teachers and scientists in their understanding of science; stimulating capable students to continue science study in college; and developing understanding of importance of science for potential non-science majors. Materials produced include text; laboratory manual; teacher's guide; programmed instruction pamphlets on sliderule and exponential notation; achievement tests; 26 teaching films (all but two in color); two teacher training films. Textbook publishing industry encouraged to "borrow" CHEMS concepts. Materials widely used: some 2,500 teachers throughout U.S.

5. Creativity and National Schools Project. Macalester College, St. Paul, Minnesota. Frank E. Williams, Director.

Six elementary schools in five states (Oregon, Utah, Illinois, Minnesota, and New York) are serving as experimental centers for in-service training in methods, procedures, and techniques for developing creative talent among young children. Traditionally, creativity in classroom teaching has been reserved for the areas of language arts, music, drama, and art. The Macalester project seeks to train teachers to trigger the release of creativity by children in other curricular areas such as arithmetic, social studies, and science as well. A number of "productive-divergent thinking behaviors" have been identified: fluency, flexibility, originality, elaboration, willingness to take risks, preference for complexity, and curiosity. To stimulate such behaviors in the students, 23 classroom teaching styles or strategies have been formulated, e.g., using paradoxes and analogies, approaching a problem through unknowns rather than knowns, building a tolerance for ambiguity, etc.

6. Education through Vision. Phillips Academy, Andover, Massachusetts. Bartlett H. Hayes, Jr., Director.

   A project designed to explore means of training high school students in visual perception, an area largely neglected in our highly verbalized learning and teaching processes. In addition to heightening visual awareness of the environment, the approach is being used to integrate academic disciplines. Still experimental, activities include action painting, pencil rubbings, design with objets trouvés, etc. Participating teachers attend six-week summer institutes. Schools represented include Melbourne (Fla.) H.S., North H.S., Worcester, Mass., and Allerdice and Langley high schools, Pittsburgh, Penna.

7. Educational Services Incorporated. 55 Chapel Street, Newton, Mass. Gilbert Oakley, Jr., Managing Director; Jerrold R. Zacharias, Director for Academic Affairs.

   ESI was established in 1958 by the founders of the Physical Science Study Committee. A nonprofit corporation, ESI sponsors curriculum projects in many areas. ESI is supported mainly by grants from private and public foundations, but also receives income from the sale of texts and other educational materials developed under ESI auspices. A partial listing of ESI curriculum projects follows:

   a. Cambridge Conference on School Mathematics. Hugh P. Bradley, Director. More than 40 monographs and reports on experimental units in mathematics, K-12.

   b. Elementary Science Study. Charles Walcott, Director. Topical units in science for use in Kindergarten through Grade 8. Kits include raw materials, films, film loops, worksheets, teachers' guides, laboratory equipment, etc.

   c. Introductory Physical Science Program. Uri Haber-Schaim, Director. A one-year course in physical science for use in junior high schools.

   d. Physical Science Study Committee. Uri Haber-Schaim, Director. The basic course now reportedly in use by more than half the high school physics students in the U.S. More than 40 paperbacks that provide collateral reading for the PSSC course are now in print. An advanced topics program that extends PSSC into a second year is now available.

e. Social Studies Curriculum Program. Peter Dow, Director. Curriculum development and production of materials in social studies at elementary and secondary levels.

f. University of Illinois Arithmetic Project. David A. Page, Director. Course materials, Grades K-6; no systematic curriculum.

8. Experimental Project in General Mathematics. Des Moines Independent Community School District, 1800 Grand Avenue, Des Moines, Iowa. A. Wilson Goodwin, Supervisor of Mathematics.

To increase relevance of general mathematics course for potential school dropouts and low achievers, program at the ninth grade level has been developed in which electric calculators, a mathematics keyboard typewriter, office copier, overhead projector, film strips using flash-card approach, and tape recorder with multiple headphones all play a part, in addition to standard equipment associated with mathematics instruction. Problems are structured as part of actual industrial situation and are printed on letterheads of recognizable businesses. Flowchart analysis of problem is standard practice to develop sequential procedure for arriving at solution.

9. Fries-Wilson-Rudolph Reading Program. School District of Philadelphia, 21st Street & the Parkway, Philadelphia, Penna. Rosemary G. Wilson, Assistant Curriculum Director in charge of reading.

Eight schools located in disadvantaged areas are taking part in three-year experimental program using Merrill Linguistic Readers, based on principles developed by Charles Carpenter Fries. Participating children have average IQ of 80, have had no kindergarten or other preschool preparation. Rigorously structured word lists that emphasize minimum contrasts in spelling patterns (cat-mat-mate-late,etc.) are fundamental.

10. Harvard Project Physics. Pierce Hall, Harvard University, Cambridge, Mass. F. James Rutherford, Project Coordinator.

Introductory physics course for the non-science major. Text units; programmed instruction booklets; achievement tests; teacher guide notes; lab and demonstration apparatus; lab experiments; transparencies; film loops; readings in history and philosophy of science. Lowell H.S., Whittier, Calif.; Capuchino H.S., San Bruno, Calif.; University H.S., Bloomington, Indiana.

A. Curricula and Instruction (continued)

11. High School Geography Project. P.O. Box 1095, Boulder, Colorado. Nicholas Helburn, Director.

Under auspices of the Association of American Geographers, teaching materials that represent current geographic thought and research are in development. Emphasis is on conceptual learning through an inductive approach rather than memorization of place names and facts. Designed for use in Grades 9 and 10, a variety of materials and methods is in use: original source materials, maps, three-dimensional models, sound tapes, overhead projector transparencies, simulation games, and sequences that involve role-playing by the students. Sequoia, H.S., Redwood City, Calif.; Tremper H.S., Kenosha, Wisc.; Englewood Jr. H.S., New Jersey.

12. Initial Teaching Alphabet Program. Bethlehem Area School District, 125 West Packer Avenue, Bethlehem, Penna. Rebecca W. Steward, Assistant to the Superintendent for Elementary Education.

While i.t.a. is by now in wide use, Bethlehem has instituted i.t.a. instruction in all 25 elementary schools. Results from a three-year demonstration and evaluation project conducted jointly with Lehigh University are highly positive. Indications for success with linguistically deficient children were particularly encouraging.

13. Interdisciplinary Multi-Facet Reading Program. South-Western City School District, Grove City, Ohio. B.L. Esporite, Supervisor.

Designed to provide optimal reading learning experiences at the K-6 level, demonstration school (Monterey Elementary) has been established. Program includes individual and small group instruction learning centers, team teaching (at Grade 6) teacher aides, in-service training, counseling, diagnostic procedures, and parent education. Program is subsequently to be expanded into junior high and high school.

14. The Madison Project. Webster College, 8356 Big Bend Blvd., Webster Groves, Missouri. Robert B. Davis, Director.

A program designed to broaden the curriculum through the introduction of coordinate geometry, an axiomatic approach to algebra, mathematical logic, and applications to physical science. The "point of intervention" is at point of the child's classroom experience or at point of instructional planning on the part of the teacher -- not at point of designing or producing textbooks. Teacher training is emphasized, both pre- and in-service. Teacher and student guides; monographs; teaching and teacher training films; packages of materials for physical experiments related to mathematics program. Weston, Connecticut, Elementary School; Columbia School, St. Louis; Bancroft School, Washington, D.C.

A. Curricula and Instruction (continued)

15. Planning for Change. Center for Urban Education, 33 West 42nd Street, New York, New York. Richard Hatch, Director.

Provided with background monographs of the history of the area, maps of their neighborhood, building survey forms, housing codes, and lists of types of service agencies, 8th grade pupils study their neighborhood microscopically and scientifically. They use a large, unmarked map to document their findings graphically (condemned buildings, parks, churches, stores, etc.), then set about designing a renewal map. The next step is to try to implement their findings and conclusions; this involves study of municipal agencies, housing codes, civil rights laws, zoning ordinances, etc., to determine where political pressure can be applied to get action. Social studies becomes a here-and-now involvement with conditions and institutions that bear immediately on the lives of the children. JHS 149, Bronx; JHS 164, Washington Heights; JHS 117, Brooklyn; JHS 43, Manhattanville (all New York City).

16. The Portland Project. Portland State College, Portland, Oregon. Vernon Cheldelin, Director.

Three high schools in Portland are now using two two-year courses integrating content and materials in physics and chemistry. One course combines Physical Sciences Study Committee and Chemical Bond Approach; the other combines PSSC and Chemical Education Material Study. The intent has been to eliminate overlap resulting from independent development of the basic curricula and to strengthen some areas through integration. Teacher's and student guides for each integration have been prepared. Jefferson, Washington, and Benson high schools, Portland, Oregon.

17. Project Able. Quincy (Massachusetts) Vocational-Technical School. (Edward J. Morrison, Director, Vocational Research Program, American Institutes for Research, 135 Bellefield Avenue, Pittsburgh, Penna.)

Curriculum development program designed to improve secondary education for all non-college preparatory students. Intent is to overcome irrelevancy for much high school vocational training to actual conditions in business and industry. Vocational capabilities considered in six areas: mechanical, electrical, spatial, chemical-biological, symbolic (verbal and numerical), and people. Basic to program is individualizing of instruction, geared to student's needs and levels of achievement.

18. Project FEAST. Center for Technological Education, San Francisco State College, 15 Southgate Avenue, Daly City, California. Hilda Watson Gifford, Director.

Project FEAST (acronym for Foods Education and Service Technology) provides an integrated program in food preparation and service in a comprehensive high school setting for Grades 11 and 12. Instruction

A. Curriculum and Instruction (continued)

18. Project FEAST. (continued)

in other than vocational courses reinforces the occupational training. A typical FEAST team includes the home economics teacher, an English teacher, a business teacher, a counselor, and the cafeteria manager; they plan their instruction together. Science requirements are met in home economics class by including materials dealing with chemistry of foods, food sanitation, heat and light, properties of metals, refrigeration, use of electronics, radiation, steam and quick freezing equipment. Social studies and physical education classes are taken along with students in other areas of concentration. Second semester of Grade 12 includes two to four hours per week of outside work experience. In addition to providing pre-occupational training for terminal students, the program articulates well with the training available in California junior colleges. Comment of one home economics teacher: "I have been in this school for twenty years, and this is the first time I have felt that I am really teaching something." Balboa H.S., San Francisco; Pacific H.S., San Leandro; Capuchino H.S. (all California).

19. Science -- A Process Approach. Commission on Science Education, American Association for the Advancement of Science, 1515 Massachusetts Avenue, N.W., Washington, D.C. John R. Mayor and Arthur H. Livermore, Directors.

This course content project places primary emphasis on development of the elementary school child's skills in using processes of science rather than on learning bits and pieces of content. In the primary grades, the subject matter is directed toward processes of observing, classifying, using space-time relations, using numbers, communicating, measuring, inferring, and predicting. At the intermediate level, children learn to formulate hypotheses, control variables, interpret data, define operationally, formulate models, and experiment. Content is drawn from the various sciences, and the objectives of all lessons are stated in terms of observable behaviors. Each lesson guide also contains a rationale that provides the teacher with background information to help him understand the role of that lesson in the process sequence. Sewell School, Tucson, Arizona; Garfield School, Monmouth, Illinois; Columbus Elementary School #99, Baltimore, Md.

20. Science Curriculum Improvement Study. Department of Physics, University of California, Berkeley. Robert Karplus, Director.

Teaching program for elementary grades aimed at increasing scientific literacy. Utilizes principles of child development in organizing content, moving from concrete to increasing levels of abstraction. Discovery method is employed: emphasis is on observation, experimentation,

A. Curriculum and Instruction (continued)

20. Science Curriculum Improvement Study. (continued)

creative response to problems, and formulation of conclusions based on interpretation of evidence. Single topic units (students' and teachers' editions); film loops; experimental materials; simple laboratory equipment. Washington School, Berkeley, California; P.S. 145, New York, New York; Norman (Oklahoma) Public Schools.

21. University of Illinois Committee on School Mathematics. 1210 West Springfield, Urbana, Illinois. Max Beberman, Director.

Integrated mathematics curriculum (Grades 7-12) to provide long-range sequential development of basic concepts. Program for Grades 7 and 8 geared to underachievers with little motivation and low level reading ability. Learning by discovery emphasized; verbalization discouraged until pupil has thorough grasp of generalization. Text in individual units; teachers' commentaries; examinations; teacher-training films; self-instructional texts. Pascack Valley Regional H.S., New Jersey; Newton H.S., Newtonville, Massachusetts; Los Angeles City Schools, Los Angeles, California.

B. Instructional Technology

1. Computer-Oriented Mathematics. Kent School, Kent, Connecticut. Robert R. Mott.

Students in the senior mathematics elective course at Kent School are receiving instruction in FORTRAN and executing programs on a time-shared computer system to solve problems arising in the School Mathematics Study Group text, Algorithms, Computations and Mathematics. Thus, the computer is being used as a laboratory tool, rather than as an element in computer-assisted instruction.

2. Institute for Mathematical Studies in the Social Sciences. Ventura Hall, Stanford University, Stanford, California. Patrick Suppes, Director.

A full-scale CAI laboratory is functioning at Brentwood School in East Palo Alto, California. More than 100 children (including all first graders) spend 30 minutes a day with programmed instruction. Half are working on mathematics and the other half on beginning reading. There are 16 terminals, each with keyboard, earphones, light pen, image projector, instructional display, and microphone. Arithmetic drill programs include five-level branching to permit progress at individual rates. Reading approach is linguistic. Daily reports list

B. Instructional Technology (continued)

2. Institute for Mathematical Studies in the Social Sciences. (continued)

lessons done by each child; weekly reports show progress, i.e., lessons plus summaries of individual response records to show strengths and weaknesses.

Other Stanford CAI projects:

Arithmetic drill and practice, Grades 3-6: Grant School, Cupertino, and Walter Hays School, Palo Alto.

Arithmetic drill and practice, Grades 1-2: Oak Knoll School, Menlo Park.

General mathematics, Grade 9: Ravenswood H.S.

Spelling fundamentals, Grades 5-6: Costano School Ravenswood.

3. Project: Developing Quality. Tenafly Public Schools, 400 Tenafly Road, Tenafly, New Jersey. Ruth G. Arnold, Director.

A demonstration center for experimental teaching situations has been established in a former super market. Facilities include a studio-classroom, microphones, closed-circuit television cameras, an observation room with one-way glass wall, and videotape recorder. Staff consists of a Director of Child Study, Intern Psychologist, School Social Worker, Speech Therapist, and Audiovisual Technician. The 1966-67 school year included demonstration lessons for educable and neurologically impaired children, the teaching of literature at elementary and secondary levels, elementary science and mathematics teaching, foreign languages, library use, utilization of new educational devices, and child study. Teachers and other school professionals are encouraged to prepare demonstrations, with students, for taping. At a subsequent session, the demonstrating group views the tape for purposes of evaluation and criticism. When appropriate, other teachers and school personnel are invited to see tape playback. Long-range plans include extension of closed-circuit network to entire school system, with PDQ demonstration center serving as central studio.

4. Project ULTRA. New York Institute of Technology, 135 West 70th Street, New York, New York. Bertram Spector, Vice President, Research.

Noting that traditional educational methods and facilities are ill-suited to the unique problems of special groups such as high school dropouts, the culturally deprived, paratechnical personnel and the

4. Project ULTRA. (continued)

exceptionally gifted, New York Institute of Technology has utilized a systems approach to education to develop individualized instructional techniques and auto-instructional methods for education at the post high school level. Project ULTRA (Unlimited Training for All) uses intensive diagnostic examinations for all applicants to determine current readiness for training geared to occupational objectives and places students in appropriate program. Computerized information center keeps continuous track of students' progress and provides feedback to academic program, permitting modification of pace and/or objectives at the student's own rate. Programmed learning, mobile units for off-campus students, auto-instructional audiovisual devices, regular discussion groups, and group diagnostic methods are all integrated into the differentially paced courses.

Beyond its immediate utility in adapting systems methods and hardware to the needs of NYIT student, Project ULTRA suggests the possible shape of future auto-instructional adult education.

5. Research Program in Simulation Games. Department of Social Relations, The Johns Hopkins University, Baltimore, Maryland. James S. Coleman, Director.

Games have been found to induce learning by generating a high level of motivation and interest, and by establishing a series of contingencies where reinforcement -- success in the game -- is contingent upon specific actions by the players. Four games developed at Johns Hopkins are now commercially available: "Life Career;" "Community Response" (to a natural disaster); "Consumers;" "Parent-Child." Each permits the child to play roles in a large differentiated society, creating an environment that is artificial for the present but realistic for the future. There is evidence that the games offer stimulation for bright students, but are also successful with the culturally disadvantaged and with underachievers. Materials published by the Simulmatics Corporation, 16 East 41st Street, New York.

6. Responsive Environment Program Center. 2560 Linden Blvd., Brooklyn, New York. Edward A. Welling, Jr., Director.

In the first effort to make use of O.K. Moore's "talking typewriter" on a large-scale basis in an urban setting, 20 Edison Responsive Environment (E.R.E.) units have been installed at the New York City Board

B. Instrucational Technology (continued)

6. Responsive Environment Program Center. (continued)

of Education's Responsive Environment Program Center. Since January 1967, approximately 324 students spent 30 minutes with individually tailored programs of reading instruction. One paraprofessional assistant supervises operation of two booths, to see that machinery is functioning properly. Assistants and supervising teachers can observe students through one-way mirrors as well as communicate through audio talkback systems. Children are brought by bus to the center from two elementary, one intermediate, and one high schools in the surrounding Brooklyn and East New York areas. In addition to electric typewriters with keys in seven-color arrangements (to facilitate touch typing learning), E.R.E. utilizes taped voice, graphic and pictorial display -- all controlled by programmed instructions in the console in each booth. Rate of progress can be adjusted to individual's needs. Center staff visualizes full-mode utilization, e.g., a story by a child concerning a home or neighborhood will be transcribed into sequential pattern and reinforced with Polaroid pictures of actual scenes from home or community.

Funded by contract from the Office of Economic Opportunity, the Center is utilized on an all-day, year-round basis. Adults make use of the facilities in the evening, and a remedial program for students from 15 schools is planned for the summer of 1967.

7. Teacher's Automated Guide. Portland Public Schools, 631 Northeast Clackamas Street, Portland, Oregon. George Ingebo.

To provide teachers with easier access to relevant curriculum activities to choose next steps and to provide teachers with an avenue for continuous participation in curriculum renewal, a computerized system is in development that will on demand select curriculum alternatives and list all information sources relative to planning an activity and supplies needed. Prototype for computerization is Science Teachers Adaptable Curriculum, which correlated curriculum materials with the basic skills and competences identified by AAAS -- Science a Process Approach: observing, classifying, using space-time relations, etc. Keysort cards are used as rudimentary "hand computer." Pilot program: Science K-3 (1966-68); K-12 (1968-71).

C. Education for the Disadvantaged

1. Autotelic Responsive Environment Nursery School for Environmentally Deprived Spanish-American Children. The New Nursery School, 1203 Fourth Street, Greeley, Colo. Glen P. Nimnicht, Director.

C. Education for the Disadvantaged (continued)

1. Autotelic Responsive Environment Nursery School for Environmentally Deprived Spanish-American Children. (continued)

Some thirty environmentally deprived Spanish-American children between the ages 3 and 5 spend three hours daily at an independent research and demonstration school established under auspices of Colorado State College. Each child may spend up to 20 minutes a day in an autotelic responsive environment booth with a carefully trained booth assistant. Equipment includes a standard electric typewriter and Bell and Howell Language Master. (Effort is made to adapt O.K. Moore's concept without investing in E.R.E. equipment.) Children explore environment and obtain immediate feedback. Method is self-pacing and permits learner to make relationships. Teachers also work on concept formation using all the senses.

2. Brooks Foundation Simon Gratz Tutorial Center. 17th and Luzerne Streets, Philadelphia, Penna. William P. Cannady, Jr., Director.

Materials and programs are being developed for use in high schools under USOE funded program entitled "The Production and Validation of Educational Systems Packages for Occupational Training of Depressed Area Students." In addition to remedial work in basic vocational skills, reading, speech, writing, and mathematics are emphasized. Effort is made to reinforce abstractions with tactual models. Pre-employment drill in reading want ads, completing job applications, interviewing procedures, etc. Components of packages are being developed from easily available materials and audiovisual devices.

3. A Direct Instruction Program for Young Disadvantaged Children. Institute for Research on Exceptional Children, University of Illinois, Urbana. Carl Bereiter.

To develop learning skills essential for academic competence, disadvantaged four-year olds take part in three daily 20-minute sessions of intensive direct instruction in language learning, arithmetic, and reading. Instructional method is characterized by: fast pace; reduced task-irrelevant behavior; strong emphasis on verbal responses (often in unison); small-step instructional units with continual feedback; heavy work demands. Work is done in groups of about five each. Approach is highly disciplined. Results with approximately 150 children over three-year period are academically encouraging, with no evident ill effects on attitude, creative work, or level of anxiety.

4. Education Improvement Program. 2010 Campus Drive, Duke University, Durham, North Carolina. Robert L. Spaulding, Director.

Planned as a comprehensive program of educational intervention in the lives of disadvantaged children, EIP began a five-year operational and evaluative project in 1965 extending over years from birth to adolescence. Families from three Durham low-income areas have been selected to participate in multi-facet program including: infant evaluation project, nursery, preschool, demonstration school, ungraded primary, and future parent program for adolescents. Initial efforts to bridge disparity between behavior patterns learned in home environment and those deemed necessary for learning in school situation place emphasis on reward system rather than aversive control techniques. Child is rewarded for listening, thinking, generalizing, and controlling physical behavior. Concrete structured environments focus on mastery of motor functions and of symbols in English and mathematics. Infant development sequences are being constructed following theoretical and descriptive framework of Piaget, psycholinguistic model of Kirk and McCarthy, and notions of sensory integration developed by Birch.

5. Program for Pre-College Centers Curriculum Resources Group. Institute for Services to Education, 2000 P. Street, N.W., Washington, D.C. Herman Branson, Director.

This is a program for preparation of materials in English and mathematics to be used with Negro students in the South, beginning in the last year of high school, to improve their chances of success in college. The student is not taught, but provoked to learn. The program seeks to make the student a full participant in all classwork, to allow him, rather than his teachers, to become responsible for his education. Of the first group of students, approximately 80 per cent enrolled in college, and only 12 per cent of these dropped out during their freshman year -- less than half the dropout rate revealed in earlier studies of predominantly Negro colleges in the South. Materials prepared by Curriculum Resources Group of Educational Services Incorporated are in use by nearly 100 teachers at Upward Bound centers and in some high schools.

6. Schools in Changing Neighborhoods. Wilmington Public Schools, P.O. Box 869, Wilmington, Delaware, Muriel Crosby, Assistant Superintendent for Educational Programs.

Following Brown vs. Board of Education in 1954, Wilmington set about desegregating a school system theretofore meticulously organized on the "separate-but-equal" concept. As a result, a number of projects were

C. Education for the Disadvantaged (continued)

6. Schools in Changing Neighborhoods. (continued)

launched to make the school system better adapted to the changed environment. These included curriculum reform, in-service training, and joint school-community activities to make education more meaningful and to arrest neighborhood decay. Pioneering work has been done in the use of family dialects as a means of fostering informal standard English. Since 1965 in-service and summer workshop training has been directed to improvement of educational leadership of administrators and supervisors.

7. The Work-Oriented Junior High School. Board of Education, Cincinnati, Ohio, John H. Owen, Supervisor, Occupational Orientation.

This project was conceived as an exemplary reorganization of one junior high school by the staff of that school, to reverse the trend of its boys and girls away from school, from learning, from a sense of personal worth, and from destructive attitudes toward the society in which they live. Methods employed involve organized group guidance, individual guidance, work orientation in the classroom, family and community involvement, and rigorous in-service education. A major underlying theme is the use of indigenous models of excellence -- alumni of the junior high who are achieving -- and the school staff recognizes that proximate objectives are more motivating than distant objectives. Starting with where the child is, the staff creates its own materials and plans its own guidance programs, ignoring the great bulk of occupational literature, occupational films, and stereotypes of suburban schools on wooded hillsides.

D. Teacher Preparation and Recruitment

1. Duo-Specialist Project. College of Education, University of Arizona, Tucson, Arizona. Pat N. Nash, Director.

To make available a supply of educational specialists in guidance, reading, special education, and library for small schools on a continuing, permanent basis, the University of Arizona has instituted a program whereby practicing teachers enroll for three semesters of training in two of these specialities, on the understanding that following training, they will return to their schools to serve as specialists. The University provides graduate interns to teach the classes ordinarily taught by the duo-specialist trainee; interns' stipends are paid by a grant from the W.K. Kellogg Foundation. The "sending" schools agree to pay the trainee's regular salary and to provide the means to utilize the trainee's new specialties on his return to teaching. During the program's first three years, 33 specialists were trained and are now providing services not previously available in rural communities throughout Arizona.

D. Teacher Preparation and Recruitment (continued)

2. Micro-teaching. School of Education, Stanford University, Stanford, California. Associate Professor Dwight W. Allen.

Micro-teaching is a scaled-down teaching encounter -- in terms of class size (1-5 students) and time (5-20 minutes). It is used as a teacher-training technique with teacher interns and high school students. In a typical situation, an intern will teach four students for five minutes while a video recording is made. The intern will then view the tape, receive student evaluations, criticize it jointly with his tutor supervisor, and reteach the lesson to a new group of students to see if he has improved. Experiments with micro-teaching indicate a high correlation between micro-teaching performance and performance in a full-sized classroom.

While this method was initiated as a training device for teaching interns, its possible applications for teacher training for new courses and methods at any level are self-evident.

3. National Teacher Corps. Office of Education, Department of Health, Education, and Welfare, Washington, D.C. Richard A Graham, Director.

Launched in May, 1966, the National Teacher Corps provides a program to train people for professional careers as teachers of disadvantaged children, rural and urban. During the 1966-67 school year 262 veteran teachers (each with about five years' experience in slum schools) and 965 college graduate teaching interns were enrolled. Interns take part in work-study programs leading to a Master's degree and state certification. They are paid according to local salary scales, 90% provided by the Federal government, 10% by the local school system. The veteran teachers supervise the teams of 3-10 interns. Program during first year involved 111 school systems and 50 university training centers in 29 states, Puerto Rico, and District of Columbia.

4. Operation Fair Chance. California State Department of Education, Sacramento, California. Paul F. Lawrence, Director.

To meet the special problems of preparing teachers to work specifically with educationally disadvantaged students, the California State Board of Education has set up a special one-year program leading to regular California certification. Fifth-year education students get maximum seminar and field experience through: (a) Orientation -- 1 week devoted to discovery of teacher-candidate attitudes, field trips; (b) Community Study - 2 weeks, sociological observation of a low-income community; (c) Job Corps Participation - 6 weeks spent in a Job Corps training center working with students; (d) School and Community Involvement - 4 weeks, work in a school situation on all aspects of administration, curriculum planning, teacher-parent conferences, school board meetings, etc.; (e) Supervised Student Teaching - 18 weeks; Summary Sharing - 1 week.

D. Teacher Preparation and Recruitment (continued)

5. Partnership Teacher Program. Women's Educational and Industrial Union, 264 Boylston Street, Boston, Massachusetts. Nona Porter, Director.

Utilizing the training and abilities of women with families who are eager to return to teaching but, because of family responsibilities, are unable to work full-time, the Partnership Teacher Program makes possible use of two teachers (one morning, one afternoon) in elementary school classes. During first year of program (1965-66), eighteen teachers participated; in second year (1966-67), nearly 60 teachers were involved. Program has also expanded into upper grades for specialist positions. Recruiting of former teachers is done in cooperation with an advisory committee from Boston College, Boston University, Northeastern University, Harvard, Radcliffe Institute for Independent Study, Simmons College, Tufts, and New England School Development Council. Partnership teachers have been placed in 14 Massachusetts public school systems.

6. Sausalito Teacher Education Project. Sausalito (California) School District and San Francisco State College. James E. Bixler, Director.

STEP is a multi-faceted cooperative enterprise between San Francisco State College and the Sausalito School District aimed at changing the pre-service and in-service teacher education curriculum for teachers of disadvantaged children. Methods involve a seminar-tutorial program (in which teachers work closely with children in a one to one relationship), a teacher-assistant program, student teaching, group counselling, outdoor education, summer school, community relations, and evaluation.

7. Urban Teacher Preparation Program. 305 Comstock Avenue, Syracuse, New York. Ernest J. Milner, Director.

In an effort to meet the problems of teaching and of rapid teacher turnover in inner city or "ghetto" areas, Syracuse University and the Syracuse Public Schools have -- with financial assistance from the Ford Foundation -- established a 14-month internship program leading to an M.A. in Education. Students spend two summers and the intervening academic year, dividing their time between observation and teaching in a demonstration school and university classes. Students work in teams and are completely responsible for classes. Teaching episodes are videotaped for analysis and criticism. Among training objectives: preparation for "culture shock"; developing children's self-image; working with social agencies; communicating with disadvantaged parents; understanding of community relations and organizations. Program draws analogy with medical internship: teacher must have real experience in dealing with his "patients" in addition to mastery of content and training in theoretical techniques.

E. Cooperative Research and Development

1. Cardozo Model School District. Board of Education, Washington, D.C. Norman Nickens, Director.

   A special unit within the District of Columbia school system has been established to introduce corrective measures into the schools of Washington's ghetto area, which contains one high school, three junior high schools, and 14 elementary schools, 600 teachers, and 18,000 children. Every school in Cardozo displays startling inadequacies: all are overcrowded, and many lack auditorium, playgrounds, libraries, or lunchrooms. A number of special programs have been introduced: science and mathematics curriculum improvement, reading, team teaching, and non-graded classrooms among them. Because of many cases of severe reading disability, much curriculum improvement has to start from scratch. The project staff seek to find ways of learning geared to children living in an environment of people without jobs or schedules, strong self-images, or a sense of destiny to succeed.

2. Catskill Area School Study Council. State University College, Oneonta, New York. John Wilcox, Executive Secretary.

   Through the Catskill Area School Study Council, 32 school districts in three rural counties of Central New York State have combined resources to provide cooperative educational services. Among projects launched are an enrichment program for talented youth, to provide opportunities beyond those regularly available in school: Saturday seminars in mathematics, science, humanities; summer workshops in oil painting, intermediate French, special topics in U.S. history, philosophy, probability and statistics, etc. Other projects include development of methods for teaching concepts in the social sciences through inductive and deductive learning experiences and use of community resources. Through bi-monthly meetings, efforts are made to involve administrative boards, teachers, pupils, and laymen in educational planning and activity. The program covers grades K-12.

3. Center for Educational Services and Research. Board of Cooperative Educational Services, 845 Fox Meadow Road, Yorktown Heights, New York. Richard L. Wing, Director.

   The Northern Westchester Bureau of Cooperative Educational Services has developed three projects in cooperation with regional educational institutions and industry:

   a. A Closed-Circuit Television Teacher Training Program is in operation at the Fordham University College of Philosophy and Letters, Shrub Oak, New York, to assist teachers in improving their techniques as

E. Cooperative Research and Development (continued)

3. Center for Educational Services and Research. (continued)

future users of CCTV. Operable by a single teacher-candidate, the unit consists of 2 cameras, a videotape recorder, a slide projector, and other accesories. The student operates the entire system while teaching the lesson. Tape playback permits analysis and evaluation.

b. A Dial Selection System has been installed in the Bedford, New York, Middle School, which permits students either in small or large groups or individually in carrels to have access to 30 different educational programs delivered by films, audio tapes, and television.

c. Computer-Assisted Instruction. In cooperation with IBM, three computer-based economics games have been developed. One is designed to teach sixth graders some basic principles of economics in operation at the time of the Neolithic revolution in Mesopotamia, c. 3500 B.C. A second game involves the pupil as an Agency for International Development official in Sierra Leone, Africa. A third game, "Free Enterprise," gives the student the opportunity to function as the owner of a toy store and then as a small manufacturer. Learning is directed toward realization that each possible decision in a given circumstance tends to carry certain rewards and costs and that the rational decision to make is one that minimizes costs and maximizes rewards within a probabilistic framework.

4. Project PINE. Mid-Hudson Regional Supplementary Educational Center, 175 Route 32N, New Paltz, New York. Raymond G. Kenyon, Director.

Utilizing a 125-acre tract of virgin land containing glacial deposits, prime and secondary floral growth, wildlife, and various types of waters, a consortium of public, parochial, and private educational institutions has established a program of Projects in Imaginative Nature Education (PINE). Activities include development of nature center with conservation and nature trails, self-guiding auto tours, extension service for schools, speakers for community groups, publications, public lectures at schools and colleges, and a museum.

5. Western States Small Schools Project. Utah State Department of Education, Salt Lake City, Utah. Rowan C. Stutz, Coordinator.

Since 1962, five state education agencies (Arizona, Colorado, Nevada, New Mexico, and Utah) have cooperated in the attempt to find solutions to common problems of small, rural schools. Among projects undertaken: individualized instructional program for a continuous progress school with predominantly Indian enrollment; new preschool programs; teacher-sharing by amplified telephone line; use of

E. Cooperative Research and Development (continued)

5. Western States Small Schools Project. (continued)

linguistic readers in teaching English to Spanish-speaking children; improved preparation for the culturally deprived. Results are shared among cooperating schools. Teams of teachers and administrators, state department staff members, and university consultants serve as "change agents" to introduce promising innovational practices.

F. Staff Use Patterns

1. American Civilization Course. Lewiston H.S., Lewiston, Idaho. Virgil Larson.

A course presenting a unified background in American history and culture has been developed to replace the standard 11th grade courses in English and in U.S. history. A three-teacher team is handling a class with triple the usual enrollment. Guest speakers, outside readings, and a variety of media aids are used.

2. Center for Team Teaching. Weber County Schools, 1122 Washington Blvd., Ogden, Utah. Jay B. Taggart, Director.

Weber School District has been experimenting with team teaching since 1957 and now has team programs operating in most of the district's 29 elementary and secondary schools serving a pupil population of 18,200. Facilities range from Roy High School, which was designed and built around the concepts of team teaching and flexible scheduling, and new cluster-type elementary schools built without inside partitions, to schools in which teams operate with traditional classroom accommodations. The Center for Team Teaching encourages visitations to observe team teaching, and internship programs are periodically arranged. Weber State College is video-taping team teaching situations for use in teacher training.

3. A Public School Program of Remediation for Children with Severe Learning Disabilities. Schaumburg Community Consolidated School District 54, Schaumburg, Illinois. Jeanne McRae McCarthy, Director of Special Services.

Program has been developed for children with normal or potentially normal intelligence who have learning disabilities of a perceptual, conceptual, or coordinative nature. Child remains in regular class, but benefits from collaborative services of teacher, psychologist, and psycho-educational diagnosticians. From diagnosis and clinical testing with individual child, a remedial program is worked out that can be administered in the classroom by the teacher.

G. Operational and Program Organization

1. Generalized Academic Simulation Programs. Hewes, Holz, and Willard, P.O. Box 112, Cambridge, Massachusetts.

   One of several computer programs (acronym: GASP) designed to help build a master schedule for efficient utilization of staff and facilities in high schools, particularly where highly diversified school programs are offered. Experience with a number of high schools of medium size and up (500+ students) indicates that a complex master schedule can be built with computer help at less over-all cost, with fewer conflicts, and with a higher degree of individualization for the student than by conventional means. Ridgewood H.S., Norridge, Illinois; Cohasset H.S., Massachusetts; Pascack Hills, H.S., Montvale, New Jersey.

2. The New School for Children. 27 Dudley Street, Roxbury, Massachusetts. Bernice Miller, Headmistress.

   The New School for Children is the first of the new experimental schools for the poor, established as an alternative to traditional public education in low-income urban areas. All parents of children enrolled in the school become members of the corporation that governs the school. A professional staff consisting of a headmistress and four teachers -- all with inner city school experience -- is moving the school structure toward its goal of a completely ungraded primary school program. During the school's first year (1966-67), however, four separate graded classes have been set up: Kindergarten (21 children); a transition first grade for children who are old enough for first grade, but who are emotionally, physically, or educationally immature (16 children); a combined first and second ungraded class for children functioning on the traditional first and second grade level (13 children); a combined third and fourth grade (19 children). Total capacity for the school is 90. Ethnic composition: Negro, 77%; Caucasian, 23%. Maximum tuition charge is $200. per year for Kindergarten and $250. for older children. First year's budget was $86,000., of which only $7,500. was anticipated to be met from tuition fees.

   Long-range plans call for using the school as an all-day community learning center. In addition, an attempt will be made to provide a wide range of services -- counseling, health, psychiatric, medical, etc. One objective of The New School is to eliminate the dichotomy existing between "school life" and "home life." The Shady Hill School in Cambridge and the Harvard Graduate School of Education are cooperating with this new effort.

G. Operational and Program Organization (continued)

3. Stanford School Scheduling Project. School of Education, Stanford University, Stanford, California. Dwight W. Allen, Robert N. Bush, Norman J. Boyan, Robert Oakford, Co-Directors.

The Stanford School Scheduling System (S^4) essentially applies computer programming techniques to the many variables involved in constructing a school's master schedule. Beginning with the curriculum to be offered, all other elements are introduced: teacher availability, size and number of classrooms, student enrollment, student preferences, and time, broken down by hours and days. Basic modular units representing class or section size in one dimension and time in the other are used as building blocks of the scheduling system. (In effect, conventional scheduling has always been done in this manner). Because of the computer's ability to manipulate vast quantities of data at lightning speed, far greater flexibility and variety can be introduced into the schedule.

Under traditional procedures, a total course enrollment of 300 students taking 11th grade English would have been divided into, say 10 sections of 30 each, meeting for one hour per day, five days a week. The computer makes possible a number of different alternatives, e.g., a weekly schedule that might contain one lecture meeting of all 300 students for one hour, five groups of 60 meeting for two hours, 20 sections of 15 meeting for one hour, and one hour of independent study. The weekly total in both cases is 1500 student-hours. The traditional schedule would require 50 teacher-hours, but the flexible example would require no more than 35 or 36 teacher hours. During 1966-67 school year, S^4 schedules have been developed in 55 schools, including Lincoln H.S., Stockton, California, Marshall H.S., Portland, Oregon, and Bloomington Jr. H.S., Bloomington, Minnesota.

H. Facilities Design, Architecture, Furnishings

1. Barrington Middle School, Barrington, Illinois.

The new middle school (ungraded, 6-8) was designed to complement the school program of team teaching, variable pupil grouping and modular scheduling with equivalent structural flexibility. A 7,000 square foot Learning Center is the hub of self-initiated learning activities.

2. Estabrook Elementary School, Lexington, Massachusetts.

One of the first buildings designed to accommodate a team-teaching program, Estabrook is a prime example of "planned variability."

H. Facilities Design, Architecture, Furnishings (continued)

3. Granada Community School, Reed Union School District, California.

Open-classroom clusters arranged on an hexagonal module provide team centers for each grouping of nongraded (K-6) pupils.

4. Holland High School, Holland, Michigan.

This high school is laid out in seven buildings: two for classrooms, and one each for specialized activities -- art center, shop, library, auditorium and music, and library. All buildings are interconnected by covered walkways with the library at the heart of the campus.

5. P.S. 219, Queens, New York, New York

A dome-shaped "school without walls" satellite building houses a nongraded K-2 program.

* * * * *

Primary sources for current information concerning developments in school architecture, facilities design, and furnishings are:

a. Educational Facilities Laboratories, Inc.
477 Madison Avenue, New York, New York

b. School Planning Laboratory
School of Education, Stanford University

c. Educational Products Information Exchange
Institute for Educational Development
52 Vanderbilt Avenue, New York, New York

II. Additional Resources on File

In addition to the projects described above, the Study has gathered information about many other activities. Because a number of them are multi-faceted, no attempt has been made to categorize them functionally. They are listed here alphabetically by state and by name of sponsoring institution.

Alabama

Alabama A. & M. College, Normal - Demonstration Project in Cooperative Education.

California

Fountain Valley School District, Huntington Beach - A multi-innovational system in an area that grew from one school to ten in four years.

San Fernando Valley State College, Northridge - Maclay Jr. H.S. On-site Training Project in compensatory education for disadvantaged youth.

San Ramon Valley Unified School District, Danville - Individualized program at Monte Vista High School.

System Development Corporation, Santa Monica - Computer-assisted learning activities.

Colorado

American Geological Institute, Boulder - Earth Science Curriculum Project.

Colorado Department of Education, Denver - Migrant Education Program.

Connecticut

Board of Education, Hartford - Hartford Intensive City - University Teacher Training Project.

University of Bridgeport, Bridgeport - Student Teaching Center in collaboration with Fairfield County public schools.

District of Columbia

Center for Applied Linguistics, Washington - Urban language study for development of standard English as a second language.

District of Columbia (continued)

Commission on Engineering Education, Washington - Engineering Concepts Curriculum Project.

National Institute of Public Affairs, Washington - Underground rhetoric for high school teachers of composition and literature.

Florida

Florida State University, Tallahassee - Computer-Assisted Instruction Center.

Indiana

Indiana University, Bloomington - Instructional Systems in Teacher Education.

Illinois

American Association of School Libraries, Chicago - Knapp School Libraries Project - to demonstrate impact of a full program of library services on the instructional program of the school.

Champaign Community Unit 4 Schools, Champaign - Department of Special Services.

Southern Illinois University, Edwardsville - Novel Experimental Teacher Education Program (Project NEXTEP).

University of Illinois, Urbana - Elementary-School Science Project.

University of Illinois, Urbana - School Science Curriculum Project.

Kansas

Flint Hills Educational Research and Development Association, Emporia - Programs in cultural enrichment,elementary science, and Latin American studies.

Kansas State Teachers College, Emporia - Professional Education for Secondary Teachers.

Kentucky

Jefferson County Public Schools - 1. Recent Developments - Department of Instruction. 2. Teaching with television.

Louisiana

Bossier Parish School Board, Benton - Northwest Louisiana Supplementary Education Center.

Maryland

Baltimore County Art Program.

Kemp Mill Elementary School, Silver Spring - M-STEP Teacher Education Center (part of Multi-State Teacher Education Project).

University of Maryland College of Education, College Park - University of Maryland Mathematics Project.

Massachusetts

Boston College Mathematics Institute and Computer Center, Chestnut Hill - Computer Program for High Schools.

Michigan

Central Michigan University, Mount Pleasant - The Partnership Vocational Education Project.

Lansing School District - Instructional innovations.

Michigan State University, East Lansing - College of Education, Elemenary Intern Program.

Waterford Township School District, Pontiac - Learning Improvement Center, multi-discipline approach to early reading problems.

Western Michigan University, Kalamazoo - Michigan Science Curriculum Committee Junior High School Project.

Minnesota

Associated Colleges of the Midwest, Northfield - Video Tape Project.

New Jersey

Irvington Public Schools, Irvington - Performing Arts Program.

New Jersey (continued)

Middletown Township Public Schools, Middletown - Supplementary Science Education Center at Sandy Hook State Park.

State Department of Education, Trenton - Technology for Children Project.

Teaneck Schools, Teaneck - Operation Community Talent.

New Mexico

Las Cruces Public Schools, Las Cruces - K-12 Science Design.

New York

Bank Street College of Education, New York - Bank Street Readers.

Eastman School of Music, University of Rochester - Project Super - The Suzuki Method.

Educational Development Laboratories, Inc., Huntington - Produces a broad range of auto-instructional materials and devices.

Horace Mann-Lincoln Institute of School Experimentation, Teachers College, Columbia University, New York - Project in Educational Communication.

Lewis and Oneida Counties Board of Cooperative Educational Services, Lyons Falls - Motivational Experiences for Culturally Disadvantaged Youth.

Teachers College, Columbia University, New York - Teaching Internships in Secondary Schools in Metropolitan New York.

Union Free School District No. 25, Merrick - Program in multidisciplinary teaching of a class research topic (Grade 6).

University of the State of New York, Albany - 1. Center on Innovation in Education. 2. The Humanities - A Planning Guide for Teachers.

North Carolina

Learning Institute of North Carolina, Winston-Salem - The North Carolina Advancement School.

State Department of Public Instruction, Raleigh - 1. Comprehensive School Improvement Project. 2. Pre-school readers program via TV. 3. Primary grades science instruction on television.

Ohio

The Ohio State University, Columbus - 1. Center for Vocational and Technical Education. 2. Industrial Arts Curriculum Project.

Wilberforce University, Wilberforce - Cooperative education - work-study programs.

Oregon

Oregon State System of Higher Education, Monmouth - Simulation Applications in Teacher Education.

University of Oregon, Eugene - Simulation techniques in the education of reading teachers.

Pennsylvania

Bethlehem Area School District, Bethlehem - Teacher-Student Nuclear Science Workshop for Lehigh Valley Area Schools.

Coatsville Area School District - An Innovation in Educational Automation.

Department of Public Instruction, Bureau of Teacher Education, Harrisburg - Pennsylvania Student Teaching Project.

Learning Research and Development Center, University of Pittsburgh - Numerous projects in individualized instruction.

Tennessee

Metropolitan Public Schools, Nashville, Davidson County - Project Mid-Tenn - supplementary educational center and services.

University of Tennessee College of Education, Knoxville - 1. Educational Opportunities Planning Center. 2. Simulation of problems of beginning teachers.

Texas

Inter-American Educational Center, San Antonio - Development and demonstration of a variety of educational programs applicable to a multi-lingual, multi-cultural community.

Research and Development Center for Teacher Education, Austin - Film Analysis of Interaction Response.

Texas (continued)

Sul Ross State College, Alpine - West Texas Innovative Education Center.

University of Texas, College of Education, Austin - Laboratory for Computer-Assisted Instruction.

Utah

Brigham Young University, Provo - Education Experimental Programs in Individualizing Instruction, Continuous Progress Education, and Micro-Teaching.

Washington

Department of Public Instruction, Olympia - Multi-State Teacher Education Project (M-STEP) in pre-service and in-service training.

West Virginia

Department of Education, Charleston - Multi-State Teacher Education Project (M-STEP) student teaching centers.

Wisconsin

Cooperative Educational Service Agency No. 10., Manitowoc - Cooperative Curriculum Development Center.

Stout State University, Menomonie - American Industry Project

University of Wisconsin, Madison - Center for Studies in Vocational and Technical Education

Wisconsin State University, La Crosse - Electronic Learning Laboratory

Wisconsin State University School of Education, Whitewater - Foreign Language Education Center

EXCERPTS FROM MAIL

As noted on page 23, a large number of the respondents to the study's first questionnaire wrote letters -- some quite long -- containing suggestions for the proposed programs, reactions to the basic idea, notions about the state of education from the classroom teacher's point of view, and so on. A few samples from such letters are reproduced below.

> "We are of the opinion that many of our teachers would take advantage of such programs. We also think that teachers will be more willing to accept new approaches to teaching and newer materials if they have the opportunity to see examples of practical applications."

-- Elenora Alexander
Director of Instructional Materials Services
Houston Independent School District

> "The project you have under development holds considerable promise. I would hope that it might be possible to bring it to fruition and that the materials developed for use in the project might be made available on a broad scale to institutions of higher learning and other educational agencies. If the project does proceed, would you see it as being possible for a College of Education such as ours to be granted permission to video tape certain programs for use in regular course instruction on the campus?"

-- George B. Brain
Dean, College of Education
Washington State University

> "Finally, I would suggest the possibility of portraying the fact that education is now a twelve month business. Our agricultural background which has designed the pattern of attendance at school is no longer a valid one. Although teachers need vacations, they have need also for a constant updating of their background and preparation in many areas that were formerly left undone or left to administrators."

-- Rufus C. Browning, Assistant
Superintendent, Public Schools
of the District of Columbia

"The concept is extremely interesting and, it seems to me, has great possibility ... In addition, it seems to me that the approach you suggest could be helpful in almost any area of Teacher Education. It would be entirely possible for almost any aspect of the program -- from courses in Psychology to actual film clips of real teaching experiences which could be used as the basis for discussions of teaching techniques -- to be used in such an inservice venture.

"Although the above comments are not specific suggestions as to areas of emphasis with which you should be concerned, they are intended to convey the general support for this sort of project."

-- Leonard M. Chaffee
Director of Teacher Education
State University of New York
at Buffalo

"I am writing to acknowledge your welcome invitation of January 12 and to congratulate you on your plans for strengthening teacher education by utilizing network television."

-- L. G. Derthick
Assistant Executive Secretary for
Educational Services
National Education Association

"The plans you discussed in your letter of January 12 for using network television to provide a continuing seminar in teacher training and education are forward looking and challenging. I will be most interested in how they develop."

-- Maxine Hess, President
Department of Elementary School
Principals
National Education Association

"I am an experienced first grade teacher and am always eager to enrich my teaching with new methods and new ideas and will look forward with a great deal of interest to your future educational programs."

-- Sarah Lapp
Lexington, North Carolina

"May I wish you every success in this project, which would seem to me to have considerable value, particularly if it can be programed at a time that would make it possible for teachers and the public to view it with some regularity."

-- A. R. Meyer, Dean of Instruction
Southeast Missouri State College

"Whether dealing with subject areas, superior students, underachievers, team teaching, or ungraded programs, I would favor placing emphasis on actual classroom demonstrations, which teachers with their own classes do not have the chance to observe, rather than on theoretical considerations, which any interested teacher can keep abreast of by visiting the library."

-- Beverly R. Orton
San Francisco, California

"I am most impressed with the objectives that you seem to have set for yourselves, and I would think that there would be a great possiblility that the network could make a tremendous contribution to education once you have identified how best to use your media. It would seem to me that if models could be developed which would graphically show to teachers how to do some of the following tasks ... you would find the product of your endeavor of tremendous use to teachers."

-- Harold E. Silvernail
Superintendent
Edmonds School District No. 15
Snohomish County, Washington

"I applaud your general motive in trying to put network television more directly in the service of educational training and would appreciate hearing about any plans which develop from the survey."

-- Theodore R. Sizer, Dean
Graduate School of Education
Harvard University

"When your plans are complete, you may depend upon the Department of Classroom Teachers to publicize it among classroom teachers across the nation. We have several channels of communications which can be effective both in building an audience and in producing a feed-back on the results, should you have an interest in this aspect of the program."

-- Margaret Stevenson
Executive Secretary
Department of Classroom Teachers
National Education Association

"If your program goes, I would like to suggest that you seriously consider projecting a program for people all the way across the board -- in high school and in college. One difficulty is that the people in the academic disciplines need to understand what learning is and how it takes place and what the products should be. I am of the opinion that this would help all education in a most effective manner."

-- R. H. Woods, President
Murray State University
Kentucky

APPENDIX D

NATIONAL BROADCASTING COMPANY, INC.

THIRTY ROCKEFELLER PLAZA, NEW YORK, N.Y. 10020, CIRCLE 7-8300

January 5, 1967

I am writing to ask your help with a project aimed at putting network television, which reaches virtually every home, in the service of teacher education and training. Our experience with Continental Classroom and other programs designed to help teachers, convinces us that this powerful communications medium can be used effectively to reach teachers everywhere and provide a continuing source for refreshing their professional skills.

We would like to develop an appropriate program format which could supply a continuing demonstration of new methods, innovations and new subject material, and show the application in the classroom. In effect, we feel we may be able to provide a continuing seminar in teacher training and education.

From the network position, of course, this project can only be tentative, until we have a clearer picture of its feasibility, but we expect that it will have national scope with the support and close association of major professional educational organizations and institutions. This initial study is being undertaken in cooperation with Teachers College, Columbia University, which has a grant from the U.S.O.E. for the purpose. Dr. Arthur W. Foshay, Associate Dean, is heading the project on behalf of Teachers College.

Will you take a few minutes to give us your suggestions as to areas of emphasis and especially to alert us to current experiments in teaching which are exciting and which we should consider. We are, of course, in touch with leaders of the new curriculum projects and are reviewing the literature. But we do not want to leave fresh ideas and unpublicized local projects unexamined. Would you make notes on the enclosed postpaid "mailer" and return it to us? With thanks for your cooperation.

Cordially,

Edward Stanley
Director Public Affairs

Enclosure

URGENT:
Please fill out this self-mailer
and return at the earliest possible

SUGGESTION SHEET
MASS MEDIA STUDY

TO THE EDUCATOR:

Will you please:

1. Call to our attention any exciting projects, studies or experimental efforts or innovations in teacher training, or in the use of new media for teacher education, which you recommend we investigate.

____

____

____

____

____

____

____

____

____

____

____

2. Call to our attention any innovations or promising efforts toward solving problems, common to all teachers, especially those in which your own institution or local community is engaged, and which you recommend we investigate.

____

____

____

____

____

____

____

____

____

____

____

NOTE: Please be sure to list names and addresses. An additional sheet may be enclosed if desired.

over ...

3. List any

   a) Individual Educators
   b) Professional Groups
   c) Industrial Groups

   you recommend we contact for either information or suggestions.

4. List any printed material or films that you recommend be secured as part of the study.

NOTE: Please list names and addresses for above. THANK YOU

Your Name

School or Institution

Address

NOTE: Please fill out reverse side, fold, staple, and mail. If you care to, please forward samples of work, records or other materials.

Postage Will Be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 24830 NEW YORK, N. Y.

MASS MEDIA FEASIBILITY STUDY
c/o TEACHERS COLLEGE, COLUMBIA UNIVERSITY
525 WEST 120th STREET
NEW YORK, NEW YORK 10027

APPENDIX F

NATIONAL BROADCASTING COMPANY, INC.
30 Rockefeller Plaza, New York, N. Y. 10020
CIRCLE 7-8300

EDWARD STANLEY
DIRECTOR OF PUBLIC AFFAIRS

Dear Classroom Teacher:

I am writing to ask your help with a project of national importance by means of which we hope to put network television, which reaches virtually every home, in the service of teacher education and training. Our experience with Continental Classroom and other programs designed to help teachers convinces us that by using this remarkably powerful communications tool effectively we can reach teachers everywhere and provide a continuing service for refreshing and upgrading their professional skills.

We are engaged now in developing a format for a weekly program which will supply a continuing demonstration of new methods and show their application in the classroom. Not only are we planning to present innovations in methodology, but also new subject-material. Certainly we can go a long way toward eliminating the well-known gap between the introduction of a new idea and its application in the classroom. In effect, we will be able to provide a continuing seminar in teacher training and education.

We expect this to be a national project, with the support and close association of the major professional educational organizations and institutions. This initial study is being undertaken in cooperation with Teachers College, Columbia University, which has a grant from the U.S.O.E. for the purpose. Dr. Arthur W. Foshay, Associate Dean, is heading the project on behalf of Teachers College.

From the network position, of course, this project can only be tentative, until we have a clearer picture of its feasibility, but we expect that it will have national scope with the support and close association of major professional educational organizations and institutions.

May I ask you to take a few minutes of your time to give us your suggestions, as to areas of emphasis. We hope to focus upon problems common to all teachers of all children, problems central to the teaching process. Our aim is to provide not merely a documentary on innovations, but a series of thoughtful presentations and evaluations of teaching strategies and school procedures now being tried across the nation in the hope that every viewing teacher will find in every program new knowledge and discoveries that can be applied to his or her own most pressing problems.

What we would really like to have from you is a long personal letter. If you are willing to write one, please do. If you cannot, won't you help us by indicating on either the long or short form of the enclosed questionnaire, the areas of greatest interest to you? Those indicated on the questionnaires are meant only to "prime the pump", and in no way to be definitive. Please attach additional sheets if you need more room.

We may not be able to reply to every letter but you may feel certain that every one will be carefully and thoughtfully read.

Thank you.

Cordially,

Edward Stanley

MASS MEDIA FEASIBILITY STUDY

(Research under the supervision of
Teachers College, Columbia University)

Teacher's Questionnaire -- The Teaching Process

Please indicate the areas which you think should be treated in a television series on education. Those listed are intended to be only illustrative; please add additional suggestions and feel free to be as specific as you wish. Please indicate the areas of greatest interest to you by checking.

	Check Here	COMMENTS (and/or explanation)
I Meeting the Intellectual Challenge of Teaching	☐	
A. Acquiring insights into the nature of knowledge and into how new knowledge should be organized and taught.	☐	
B. Studying teaching; effective teacher styles, the art of teaching.	☐	

	Check Here	COMMENTS (and/or explanation)
II Forming a Human Partnership with Children		
A. Capitalizing on the exciting knowledge we now possess concerning personality development and its relationship to teaching and learning.		
1. Building successful relationships with children from all varieties of background.		
2. Encouraging the uniqueness of the individual.		
3. Developing substantial life-values in children.		
III The Teacher and the Community		
IV Professional Problems of the Teacher		

Others: ____

____

____

Additional Comments and Suggestions: ____________________

____

____

* * *

If you are interested in helping us with additional programming guidelines, please fill out the following pages, which treat the above in greater detail. If you do not wish to continue, please fold and mail this entire booklet. SEE LAST PAGE.

	Check Here	COMMENTS (and/or explanation)
I Meeting the Intellectual Challenge of Teaching A. Acquiring insights into the nature of knowledge and into how new knowledge should be organized and taught for more effective learning:		
e.g. Developing strategies for: 1. identifying the concepts, principles and methods of inquiry suitable for the capacities of given groups at given times		
2. incorporating discoveries at the frontiers of knowledge not yet in textbooks into the curriculum.		

Others:

	Check Here	COMMENTS (and/or explanation)
B. Studying teaching; effective teacher styles, the art of teaching:		
e.g. Developing strategies for: 1. stimulating students with the excitement of the subject		
2. encouraging curiosity, independent study, ingenuity, resourcefulness, achieving active individual attention		
3. helping students to discover relationships, conflicts and parallels among problems and concepts, and between different fields of knowledge		
4. developing competence in basic skills		

	Check Here	COMMENTS (and/or explanation)
5. challenging the superior students without destroying the will to learn of the others		
6. dealing with underachievers		

Others:____

____

II Forming a Human Partnership with Children

A. Capitalizing on the exciting knowledge we now possess concerning personality development and its relationship to teaching and learning: e.g. Developing techniques for: 1. building successful relationships with children of all varieties of background		
a. the challenge of culturally alienated youth		
2. encouraging the uniqueness of the individual		
a. uncovering and developing potential talent		
b. developing the positive self-concept of children and youth		
c. discovering the ways in which the individual student is best able to learn		
d. helping youngsters learn to cope with their disappointments, failures and short-comings		
e. encouraging children to plan for a life in a technological society; career planning; choosing appropriate role models		

	Check Here	COMMENTS (and/or explanation)
f. preventive measures to be practiced with potential dropouts		
3. developing substantial life-values in children		
a. helping youngsters to find the meaning of life, the purpose to which they wish to devote their lives, the meaning of living as free men in a free society		
b. helping children learn to accept responsibility		
c. helping children learn to identify with the needs of others and the Family of Man; the common humanity of all mankind.		

Others:____

____

III The Teacher and the Community		
A. How to respond to community requests for help		
B. Involving parents and families in school plans		
C. The role of the teacher as an active participant in the lives and affairs of communities and cultures which may be different from our own		
D. The role of the teacher as a catalyst to understanding the social and moral questions of our time, assisting youth with the formation of values and a sustaining ethical standard		
E. The role of the school in social change		

Others: ____

____

IV Professional Concerns of the Teacher	Check Here	COMMENTS (and/or explanation)
A. Flexible scheduling, team teaching, ungraded programs, computer assisted instruction, the role of the paraprofessional in freeing the teacher, differentiation of responsibility		
B. Participation in planning		
1. teacher-administrator co-operation		
2. the voice of the teacher in professional decisions		
3. the status of the teacher in school and community		
C. Time to teach: administrative interference with the teaching process; bureaucratic practices, unnecessary paper work, fund drives		
D. Professional growth		
1. Developing a personal strategy for keeping up to date		
2. developing resources for growth in self-knowledge		
3. securing meaningful in-service training		
4. current developments in pre-service training		
E. The possibilities and the problems in Federal programs		

	Check Here	COMMENTS (and/or explanation)
F. The teacher as citizen		
1. a voice on the issues of the day that affect education		
2. school integration		
3. intellectual freedom and the right to dissent		
4. compensatory education		

Fold

Others: ____________________

____

____

***** * * * ***** * * * ***** * * * ***** * * * ***** * * * ***** ***

Name ____________________

School or Institution ____________________

Address ____________________

____

Please fold, staple once and mail

Postage Will Be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 34830 NEW YORK, N. Y.

MASS MEDIA FEASIBILITY STUDY
c/o TEACHERS COLLEGE, COLUMBIA UNIVERSITY
525 WEST 120th STREET
NEW YORK, NEW YORK 10027

APPENDIX G

CONSULTANTS

The following persons were consulted during the initial phase of the study:

From Teachers College

- Robert L. Allen, Professor of English
- Howard F. Fehr, Chairman, Department of Mathematical Education
- Miriam L. Goldberg, Associate Professor of Psychology and Education
- Edward J. Green, Professor of Psychology and Education
- Harvey Hornstein, Assistant Professor of Psychology and Education
- Erling M. Hunt, Professor Emeritus of History; Coordinator of Internships
- Leland B. Jacobs, Professor of Education
- Geraldine LaRocque, Assistant Professor of English
- Matthew B. Miles, Professor of Psychology and Education
- A. Harry Passow, Professor of Education
- Paul C. Rosenbloom, Professor of Mathematics
- Mary Budd Rowe, Assistant Professor of Natural Science
- Sloan R. Wayland, Professor of Sociology and Education

From other institutions

- Robert H. Anderson, Professor of Education, Harvard University
- Manuel Barkan, Professor of Art Education, The Ohio State University
- Edward G. Bernard, Director, Bureau of Audiovisual Instruction, New York City Board of Education
- Jeanne Chall, Professor of Education, Harvard University
- Muriel Crosby, Ass't. Sup't. for Educational Programs, Wilmington (Del.) Public Schools
- Marvin Feldman, Program Associate, The Ford Foundation
- James Macandrew, Director of Television, New York City Board of Education
- Edward L. Mattill, Head, Department of Art Education, Pennsylvania State University
- Lawrence Stolurow, Computer Center, Harvard University
- Patrick C. Suppes, Director, Institute for Mathematical Studies in the Social Sciences, Stanford University
- Rosemary C. Wilson, Assistant Director in charge of Reading, Board of Public Education, Philadelphia, Pa.

APPENDIX H

SELECTED BIBLIOGRAPHY

Curriculum Projects in English. 1966. Champaign, Illinois: National Council of Teachers of English.

Roy A. Edelfelt, ed., *Remaking the World of the Career Teacher*. 1966. Washington: National Commission of Teacher Education and Professional Standards, NEA.

John I. Goodlad, "The Curriculum," in *The Changing American School*, 65th yearbook of the National Society for the Study of Education, 1966. Chicago: University of Chicag Press. pp. 32-58.

John I. Goodlad, Renata von Stoephasius, and M. Frances Klei, *The Changing School Curriculum*, 1966. New York: Fund fo Advancement of Education.

Harold B. Gores, "School house in Transition," in *The Changing American School*, op. cit., pp. 135-151.

Richard E. Haney, *The Changing Curriculum*: Science. 1966. Washington, Association for Supervision and Curriculum Development, National Education Association.

J. David Lockard, *Report of the International Clearinghouse on Science and Mathematics Curricular Developments*. 1966 College Park, Maryland: Commission on Science Educatio of the American Association for the Advancement of Science.

Wesley C. Meierhenry, ed., *Media and Educational Innovation*. A symposium on Identifying Techniques and Principles for Gaining Acceptance of Research Results of Use of Newer Media in Education, November 24-27, 1963. Lincoln, Nebraska: University of Nebraska Press.

New Curriculum Developments. Report of the ASCD's Commission on Curriculum Development. 1965. Washington: Association for Supervision and Curriculum Development, National Education Association.

Pacesetters in Education. Vol. I, 1 (February 1966) and 2 (April 1966). Washington: U.S. Office of Education.

Schools for the Sixties. Report of the NEA Project on Instruction. 1963. New York: McGraw-Hill.

END

DEPT. OF HEALTH

EDUCATION AND

WELFARE

U.S. OFFICE OF

EDUCATION

ERIC

DATE FILMED

6-17-68